CITY OF KIRKLAND
Planning and Building Department
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ADVISORY REPORT
FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

To: Kirkland Hearing Examiner

From: *Désirée Goble* Désirée Goble, AICP, Project Planner

Eric Shields, Planning Director

Date: March 1, 2016

File: BRIDLESTONE ESTATES PRELIMINARY SUBDIVISION, REZONE, AND MULTIPLE SENSITIVE AREAS DECISIONS, SUB15-00572

Hearing Date and Place: March 9, 2016
Peter Kirk Room
123 Fifth Avenue, Kirkland

TABLE OF CONTENTS

Section **Page**
I. INTRODUCTION 2
A. APPLICATION 2
B. RECOMMENDATIONS 2
II. FINDINGS OF FACT AND CONCLUSIONS 5
A. SITE DESCRIPTION 5
B. HISTORY 7
C. PUBLIC COMMENT 8
D. STATE ENVIRONMENTAL POLICY ACT (SEPA) AND CONCURRENCY 11
E. APPROVAL CRITERIA 12
F. DEVELOPMENT REGULATIONS 23
G. COMPREHENSIVE PLAN 29
H. DEVELOPMENT STANDARDS 30
III. SUBSEQUENT MODIFICATIONS 30
IV. CHALLENGES AND JUDICIAL REVIEW 30
A. CHALLENGE 30
B. JUDICIAL REVIEW 31
V. LAPSE OF APPROVAL 31
VI. APPENDICES 31
VII. PARTIES OF RECORD 31

INTRODUCTION

A. APPLICATION

1. Applicant: Cher Anderson, KLN Construction Inc.
2. Site Location: 4600-4646 116th Ave NE (see Attachment 1)
3. Request: The applicant requests approval of a rezone and preliminary subdivision as described below (see Attachment 2).
   a. Rezone the 17.59 acre subject property from RS/RSX 35 (single-family residential, minimum lot size of 35,000 square feet (s.f.)) to RS 12.5 (single-family residential, minimum lot size of 12,500 s.f.).
   b. Subdivide the property into 35 lots for construction of single-family homes. Access to the lots will be provided via a new public access road off of 116th Avenue NE.
   c. Fill and paper fill a portion of a wetland to provide vehicular access that meets City requirements. Proposed compensatory mitigation includes wetland creation, restoration, and enhancement.
   d. Reduce the wetland buffer only where necessary to provide access to the remainder of the property. Mitigation is proposed through enhancement.
   e. Install a stream culvert to create vehicular access and install utilities that comply with the City's requirements.
   f. Discharge storm water using a piped outfall to the wetland buffer.
   g. Install a bioswale along the south side of the new access road to treat stormwater runoff prior to water reaching stream/wetlands or their associated buffers.
4. Review Process: Process IIB, Hearing Examiner conducts public hearing and makes recommendation; City Council makes final decision.
5. Summary of Key Issues and Conclusions:
   a. Compliance with the Rezone Approval Criteria (see Section II.E.1).
   b. Compliance with Preliminary Plat Approval Criteria (see Section II.E.2).
   c. Compliance with various Sensitive Areas Approval Criteria (see Sections II.E.3-8)
   d. Equestrian and pedestrian access to Bridle Trails State Park (see Section II.F.6).

B. RECOMMENDATIONS

1. Based on Statements of Fact and Conclusions (Section II), and Attachments in this report, we recommend approval of this application subject to the following conditions:
2. This application is subject to the applicable requirements contained in the Kirkland Municipal Code, Zoning Code, and Building and Fire Code. It is the responsibility of the applicant to ensure compliance with the various provisions contained in these ordinances. Attachment 3, Development Standards, is provided in this report to familiarize the applicant with some of the additional

development regulations. This attachment does not include all of the additional regulations. When a condition of approval conflicts with a development regulation in Attachment 3, the condition of approval shall be followed.

3. Trees shall not be removed or altered following plat approval except as approved by the Planning Department (see Conclusion II.F.3.b).

4. As part of the land surface modification permit application, the applicant shall:

   a. Comply with all recommendation found in the geotechnical report prepared by Liu & Associates, Inc. (see Conclusion II.A.1.b).

   b. Submit development plans that incorporate the approved Critical Areas Report and Mitigation Plan (see Conclusion II.E.3.b.(1)).

   c. Submit a financial security device to cover the cost of completing the critical areas report. The security shall be consistent with the standards outlined in Zoning Code section 90.145 (see Conclusion II.E.3.b.(2)).

   d. Enter into an agreement with the City that runs with the property, in a form acceptable to the City Attorney, indemnifying the City from any claims, actions, liability and damages to sensitive areas arising out of development activity on the subject property (see Conclusion II.F.7.b).

   e. Dedicate a natural greenbelt protection easement encompassing the stream and associated buffer on the site. The boundaries of the Natural Greenbelt Protection Easement shall be established by survey. All surveys shall be located on KCAS or plat bearing system and tied to known monuments (see Conclusion II.F.8.b).

   f. Submit erosion control plans, which depict the location of a six-foot high construction phase fence along the boundary of the entire stream buffer with silt screen fabric installed per City standard. The fencing shall be installed prior to issuance of any permits. The fence shall remain upright in the approved location for the duration of development activities (see Conclusion II.F.9.b(1)).

5. Prior to starting any land surface modification the applicant shall obtain all necessary state and federal authorization for impacts to the wetlands and/or timber harvesting. State and Federal agencies the applicant should contact include the US Army Corp of Engineers, Washington State of Fish and Wildlife, Washington State Department of Ecology, and Washington State Department of Natural Resources. For additional information on other agencies with jurisdiction contact ORIA (Office for Regulatory Innovation and Assistance) Monday through Friday, 8:00 a.m. to 5:00 p.m. (see Conclusion II.C.2).

6. As part of the application for a Building Permit the applicant shall submit:

   a. Comply with all recommendation found in the geotechnical report prepared by Liu & Associates, Inc. (see Conclusion II.A.1.b).

   b. Enter into an agreement with the City that runs with the property, in a form acceptable to the City Attorney, indemnifying the City from any claims, actions, liability and damages to sensitive areas arising out of development activity on the subject property (see Conclusion II.F.7.b).

c. Dedicate a natural greenbelt protection easement encompassing the stream and associated buffer on the site. The boundaries of the Natural Greenbelt Protection Easement shall be established by survey. All surveys shall be located on KCAS or plat bearing system and tied to known monuments (see Conclusion II.F.8.b).

7. Prior to final inspection of the land surface modification permit, the applicant shall:

a. Complete installation of approved Critical Areas Report and Mitigation Plan, subject to inspection by the City's consultant at the applicant's expense (see Conclusion II.E.3.b.(2)(a)).

b. Provide proof of a written contract with a qualified professional who will perform the monitoring program, together with a completed contract and fees to fund review of the monitoring and maintenance activities, (i.e. inspection of plant materials, annual monitoring reports or revegetation activities) by the City's consultant. Alternatively, the applicant shall provide a copy of a completed contract and fees to fund completion of the monitoring program by the City's consultant (see Conclusion II.E.3.b.(2)(b)).

c. Provide proof of a written contract to cover maintenance activities outlined in the Critical Areas Report and Mitigation Plan (see Conclusion II.E.3.b.(2)(c)).

d. Install a permanent 3 to 4 foot tall split rail fence between the boundary of the wetland/stream buffer and the developed portion of the site (see Conclusion II.F.9.b.(2)).

8. As part of an application for a final subdivision, the applicant shall:

a. Dedicate a natural greenbelt protection easement encompassing the stream and associated buffer on the site. The boundaries of the Natural Greenbelt Protection Easement shall be established by survey. All surveys shall be located on KCAS or plat bearing system and tied to known monuments (see Conclusion II.F.8.b).

b. Dedicate a ten foot wide equestrian/pedestrian easement to Bridle Trail State Park between Lots 9 and 10 as supported by the Bridle Trail Neighborhood Plan (see Conclusion II.F.6.b).

c. Dedicate a 45 foot wide right of way to serve the new lots (see Conclusion II.F.5.b(3)).

d. Install the required improvements as described in Attachment 3, as modified by Section II.F.5, as follows:

(1) The following half-street improvements within the 116th Avenue NE right-of-way bordering the subject property:

(a) Widen the street to 16 ft. from centerline to face of curb to provide for an 11 ft. northbound lane and a 5 ft. wide northbound bike lane.

(b) Install a storm drainage collection and conveyance and an 8-10 ft. soft path with a surface material suitable for pedestrians and equestrians.

(2) The following improvements within the 45 foot wide right of way to serve the interior lots:

(a) 24 ft. wide pavement

(b) Vertical curb and gutter

(c) Storm drainage

(d) 4.5 ft. wide landscape strips with street trees between the curb and the sidewalks.

(e) 5 ft. wide sidewalks.

(3) Prior to installing these improvements, plans must be submitted for approval by the Department of Public Works.

(4) In lieu of completing these improvements, the applicant may submit to the Department of Public Works a security device to cover the cost of installing the improvements and guaranteeing installation within one year of the date of final plat approval (see Conclusion II.F.10.b and Attachment 3).

II. FINDINGS OF FACT AND CONCLUSIONS

A. SITE DESCRIPTION

1. Site Development and Zoning:

a. Facts:

(1) Size: 766,131 s.f. (17.59 acres)

(2) Land Use: King County Assessor's Records shows that there are five single family homes located on the subject property. Previously, two of the properties operated equestrian facilities that were utilized by various groups. There are a number of sheds, barns, out buildings, riding arenas, paddocks, etc.

(3) Zoning: The subject property is comprised of five tax parcels. The northern three parcels are zoned RS 35 and the southern two parcels are zoned RSX 35. Both zones have a minimum lot size of 35,000 square feet.

(4) Terrain: The property slopes downward from a high at the southeastern property corner to a low at the southwestern (adjacent to 116th Avenue NE) property corner. The topography is not a smooth transition; rather there are a number of level areas, typically located around structures and paddocks, surrounded by steeper areas (see Attachment 2, Sheet 2 of 14). A moderate landslide hazard area extends onto the subject property from the north on the east side of Wetland A, described below.

A geotechnical report addressing the potential landslide hazard has been submitted (see Attachment 4).

The geotechnical report states:

> *Based on the soil conditions encountered by test borings drilled on the site, it is our opinion that the project site is suitable for the proposed development from the geotechnical engineering viewpoint, provided that the recommendations in this report are fully implemented and observed during and following completion of construction.*

(5) Vegetation: The arborist report indicates that there are 636 trees located on the properties. Tree retention is discussed in Section II.F.3.

(6) Sensitive Areas: The property is located in the Yarrow Creek Basin, a primary basin. The basin and classification of the sensitive area features identified below determine the minimum required buffer width. There are two streams located on the subject property, three onsite wetlands and two offsite wetlands that impact the subject property (see Attachment 2, Sheet 11). Both of the streams are located within wetlands that have a larger required buffer. An additional ten foot setback is required from the outer edge of the buffer.

(a) A Type 3 wetland (Wetland A), located along the north property line approximately 275 feet west of the northeast property corner, has a required 50 foot buffer. Within this wetland is a Class C stream, with a required 35 foot buffer. The stream intersects the northern property line approximately 300 feet west of the northeast property corner. The applicant is proposing to comply with all critical areas buffer and setback requirements for this stream and wetland.

(b) Two onsite and two offsite wetlands along the western edge of the property are Type 2 wetlands, with a required 75 foot buffer. There are two access points to the subject property from 116th Avenue NE. The northern access bisects Wetland B. This wetland extends southward, northward (offsite), and northeast (onto the subject property). The southern access is located approximately 75 feet north of the southwestern property corner. On the south side of the southern access is Wetland C and on the north side is Wetland B.

A Class A stream, with a 75 foot buffer flows from north to south and is located within Wetlands B and C.

(c) An offsite Type 2 wetland is south of the southwest property corner. A portion of the required 75 foot wetland buffer extends onto the subject property.

(d) The applicant is proposing a number of critical area modifications for access and handling storm water (see Section II.E.3-8).

b. Conclusions: Land use, terrain and vegetation are not constraining factors in the consideration of this application. The geotechnical report recommendations should be followed in all phases of development. Size, zoning, and sensitive areas located both on and offsite are relevant factors in the review of this application.

2. Neighboring Development and Zoning:

a. Facts: Neighboring properties are zoned (see Attachment 1) and contain the following uses:

(1) North: Zoned RS 12.5, single-family residences

(2) Northwest: Zoned RS 35, unimproved parcel with Wetland B

(3) South: Zoned RSX 35, single-family residences

(4) East: Bridle Trails State Park, located in unincorporated King County, Zoned R1, State Park

(5) West: 116th Avenue NE and unimproved Washington State right-of-way between 116th Avenue NE and I-405

b. Conclusion: The neighboring development and zoning are not constraining factors in this application.

B. HISTORY

1. Facts: On May 27, 1994 The Evergreen Equestrian Center located on tax parcel numbers 162505-9031 and 162505-9022 received a recommendation of approval from the City of Kirkland for a Current Use Taxation application. On June 22, 1994 King County issued a Decision of Granting Authority for the Current Use Taxation for the Evergreen Equestrian Center. This resulted in a tax reduction for the subject property.

The title report contains the following note regarding the Decision of Granting Authority for the Current Use Taxation for Evergreen Equestrian Center:

> *The lands described herein have been classified as open space land, as disclosed by notice recorded under Recording No. 9503210944, and are subject to the provisions of RCW 84.34, which include the requirement of a Continuation of Restricted Use in order to continue the present assessment rate. A change in use can cause an increased assessment rate for present and past years. Any sale or transfer of all or a portion of said land requires execution of a notice of compliance form attached to the excise tax affidavit.*

2. Conclusion: RCW 84.34.070 regulates the withdrawal from the Current Use Taxation for Evergreen Equestrian Center.

C. PUBLIC COMMENT

1. Facts: The initial public comment period ran from July 2 to July 21, 2015. The Planning Department received 49 comment letters (see Attachment 5) during this comment period. Following is a summary of the comments received and staff's response:

   a. **NEIGHBORHOOD PLAN:** The Neighborhood Plan had its last major update in 1986 and, therefore, it is out of date. The South Rose Hill/Bridle Trails Neighborhood Association has asked the City to examine the issue of residential densities and equestrian activities in the area.

   Staff Response: The application was submitted on March 26, 2015, a determination of incompleteness was issued on April 24, 2015, the requested materials were submitted on June 10, 2015 and the application was deemed complete on June 25, 2015. A complete application determines the policies and regulations that apply to a project.

   b. **REZONE:** The rezone to smaller lot sizes would not support equestrian uses and is not consistent with the rezone criteria.

   Staff Response: On Page XV.C-1, the Bridle Trails Neighborhood contains the Vision Statement: "... The primary policy direction for this neighborhood is to maintain the low-density residential character with some areas containing large lots capable of keeping horses."

   The Bridle Trails Neighborhood Plan, Page XV.C-4 contains the following statement: "Southwest of Bridle Trails State Park and adjacent to 116th Avenue NE is an area which contains low density residential development (one to three dwelling units per acre) and large stable facilities. Existing equestrian access to Bridle Trails State Park from this area should be preserved."

   There are no specific statements in the Comprehensive Plan requiring that equestrian facilities must be provided within this area. The Bridle Trails Neighborhood plan allows a density of one to three dwelling units per acre for the subject property (see Attachment 9). The proposed development is maintaining an equestrian access connection to Bridle Trails State Park (see Attachment 2).

   A complete analysis of the required rezone criteria is included in Section II.E.1, below.

   c. **LOSS OF EQUESTRIAN FACILITIES:** Loss of two of five existing horse boarding facilities. The plan should include some form of equestrian support whether it is retention of one of the covered arenas, the barns, or creation of such facility.

   Staff Response: Neither the Zoning Code nor Comprehensive Plan gives the City the authority to require that the applicant provide any equestrian features.

   The existing stable facilities should be encouraged to remain and new equestrian facilities should be allowed as appropriate to complement Bridle Trails State Park. Existing equestrian access to Bridle Trails State Park from this area should be preserved.

   Staff Response: The Zoning Code does not permit "Commercial Equestrian Facilities" or "Commercial Recreation Area and Use" within the RS or RSX zones. The only options to retain the equestrian facilities would

be to find someone willing to purchase and operate the existing facility or apply for a "Community Facility". The zoning code regulations do allow property owners to own and keep horses on their property within the RS 35 and RSX 35 zones. See Zoning Code section 115.20.5.

Section II.B of this report describes how the City supported a request from the property owners in 1994 to King County for a "Current Use Taxation for the Evergreen Equestrian Center". This was an incentive intended to encourage retention of equestrian facilities on the subject property.

d. **EQUESTRIAN EDUCATION:** The following questions and comments regarding equestrian education:

- Does the city of Kirkland have a plan for educating the public in safe horse behavior?
- Will there be a teaching program at the park when there is no more Flicka Farm at bridle trails?
- What is the future of Bridle Trails? Will it continue to be a horsepark?
- What is the alternative in the City of Kirkland to provide a safe teaching environment close to the city's horse park?

Staff Response: The equestrian community could take advantage of this opportunity to reach out to the broader community and offer some classes in how to behave around horses that they might meet as they traverse the park. Bridle Trails Park Foundation offers a number of educational programs and perhaps this could be added to their repertoire. Bridle Trails State Park borders the City of Kirkland but is not located within the City limits.

e. **STORMWATER:** Development in this project area should be done consistent with the existing neighborhood plan, and runoff should be dealt with on site. Mitigation should NOT include using any wetlands for runoff, as this would degrade the wetland with toxic chemicals.

Staff Response: The project is required to provide temporary and permanent storm water control per the 2009 King County Surface Water Design Manual and the Kirkland Addendum (see Attachment 3, Public Works, Surface Water Conditions). Discharge of storm water to the wetland buffer has been reviewed by the City's wetland consultant and found to comply with the existing code requirements (see Sections II.E.6 & 7). Wetland buffers help to remove contaminants and moderate runoff volumes and flow rates before stormwater reaches the wetland itself.

f. **STREAMS/WETLANDS:** … The legally required buffers are designed and needed to protect our precious, remaining wetlands. Allowing encroachment into the wetland buffers should not be allowed.

Staff Response: Currently there are a number of encroachments located in the wetland buffers including: a barn/riding arena, the structure on the northwest side of the property identified as an existing residence, and the fenced pasture on the south side of the southern driveway. Also, the northern driveway bisects wetland B. The applicant is proposing to correct all of these non-conformances and enhance the buffers so that they perform at a higher level than the existing buffers. Sections II.E.3-8 addresses how the proposal complies with the Critical Areas regulations.

g. **TREES:** Trees encroachment on the wetland and removal of most of the trees on the site, as seems likely for RS 12.5, would have major impacts.

Staff Response: Initially the applicant proposed 37 lots with a circular right of way and wanted to pursue an integrated development plan (IDP). An IDP is a process that resolves tree retention requirements at the subdivision stage and provides greater predictability as the project moves towards construction. However, it requires more information upfront and provides less flexibility to the applicant if tree conflicts arise during development. In response to the City's consulting urban forester's comments, when considering the proposed tree retention, the applicant revised the site plan to create two cul-de-sacs, work with existing topography to minimize the number of retaining walls, and retain clusters of trees to be located within grove easements. The applicant decided not to pursue an IDP but still chose to design the project to maximize retention of tree clusters (see Attachment 17).

h. **TRAFFIC:** Unnecessary traffic impacts will result from the proposed development.

Staff Response: Public Works staff has reviewed the traffic impact analysis report for the proposed project and concluded that the project will not create significant traffic impacts that will require specific off-site transportation mitigation. Based on this analysis, a Determination of Non-Significance (DNS) was issued. The SEPA Determination Notice included the opportunity to appeal the road concurrency test. No SEPA and/or Concurrency appeal was submitted before the deadline of February 12, 2016.

i. **FIRE RESPONSE TIMES: "**At a neighborhood meeting in May, City Manager Kurt Triplett admitted that the area of the development has highly unacceptable fire response times because of a limitation of equipment and crews. This development would increase demand for services and make the situation worse, putting all residents at unacceptable risk. The City should not approve a new development in this neighborhood until fire response capability is increased to acceptable levels for existing residents and any projected new residents and adhere to the principle of concurrency."

Staff Response: Joe Sanford, Interim Fire Chief, verified with the City Manager that the context of his comments was with regard to emergency response travel time. Interim Chief Sanford also noted "that four minutes of travel time ends virtually at the edge of the proposed development. This means that travel time to the development may be over the desired four minute standard by five to ten seconds at most. A ten second addition to the travel time standard, while not within our stated goal, is still considered acceptable for both fire and emergency medical service."

j. **116TH AVE NE IMPROVEMENTS**: The City should require, or politely ask, that the developer build or contribute significantly to protected bicycle lanes and sidewalks along 116th Ave NE from NE 60th St to the Bellevue border. The lack of safe walking and bicycling facilities in this area is also preventing equitable access to this state park by families who do not have cars or who struggle to afford cars. Another commenter requests that an equestrian gravel trail be maintained along 116th.

Staff Response: Public Works requirements include construction of bike, pedestrian, and equestrian access within the 116th Ave NE right of way (see Attachment 3 and Section II.F.5). The City only has authority to require these improvements adjacent to the subject property.

k. **RODENT CONTROL:** What will the City do to control rodents from scattering into the surrounding neighborhoods during construction?

Staff Response: Prior to issuance of Building, Demolition or Land Surface Modification permit(s) the applicant must submit a proposed rat baiting program for review and approval (see Attachment 3, Building Department). Prior to issuance of a permit the applicant will submit a letter from the rodent abatement company demonstrating compliance with KMC 21.41.302(e) (2) and continue the program at least until the start of work.

l. **PERMITTING NOTIFICATION**: Patrick McGraner from the Washington State Department of Ecology, reviewed the SEPA checklist and noted that the applicant did not mention the need for state or federal permits/authorizations for direct wetland fill under the Background section A(10). Additionally, under Section B(3)(a)(3) for Surface Water – Estimate the amount of fill, the applicant incorrectly entered "none" when per the critical areas study, 1,184 sf of fill is being proposed for an access road.

Mr. McGraner requested that the City of Kirkland condition approval of any site work with the following stipulation: The applicant shall obtain all necessary state and federal authorizations for wetland impacts prior to beginning any ground disturbing activities or timber harvest.

Staff Response: Zoning Code 90.15.3 states "Nothing in these regulations eliminates or otherwise affects the responsibility of the applicant or property owner to comply with all other applicable local, state, and federal laws regulating development activities in sensitive areas, as herein defined."

m. **ENHANCED TREATMENT:** Karen Walter, Watersheds and Land Use Team Leader for the Muckleshoot Indian Tribe Fisheries Division, has requested that the project treat its stormwater using enhanced treatment methods as the stormwater will eventually discharge to Yarrow Creek, a fish-bearing water. She states that enhanced treatment is necessary to avoid impacts to coho salmon, in particular. She provided scientific literature to support her comments. She provided additional supporting documentation in her comments during the SEPA comment period.

Staff Response: Based on the original response from Public Work (see below) the City doesn't have the code authority to require the applicant to provide enhanced treatment.

Public Works Surface Water staff reviewed Ms. Walter's comments and provided the following response regarding stormwater treatment. Kirkland concurs that treatment of stormwater is an important aspect of mitigating the impacts of development on fish and fish habitat. Kirkland follows surface water design manuals that were developed based on best available science, and adopts new regulations as scientific knowledge changes. These design manuals have the intent of protecting fish and fish habitat from the impacts of stormwater. We

have reviewed requirements in the current manual that Kirkland uses, the 2009 King County Surface Water Design Manual, as well as newer manuals that the City will be adopting by the end of 2016. Based on that review, the Basic level of water quality treatment will be required for all pollution generating impervious surface area in the Bridlestone Estates Subdivision. The land use of this project does not warrant the enhanced level of water quality treatment. Per the 2014 Stormwater Management Manual for Western WA (prepared by the WA State Department of Ecology), enhanced treatment is only required for industrial, commercial, and multi-family residential projects, and roads with high annual average daily traffic. This is the standard used by the City of Kirkland. The most recent stormwater manual in our area, the 2016 King County Surface Water Design Manual, which Kirkland will be adopting by the end of 2016, only requires the use of enhanced treatment in high density subdivisions (with densities equal to or greater than 8 units per acre), in addition to commercial, industrial, multifamily and some roads. These requirements were the same in the 2009 King County Surface Water Design Manual. The Bridlestone Estates Subdivision does not meet this high density and therefore enhanced treatment is not warranted.

2. Conclusion: Prior to starting any land surface modification work the applicant should obtain all necessary state and federal authorization for impacts to the wetlands and/or timber harvesting. State and Federal agencies the applicant should contact include the US Army Corp of Engineers, Washington State of Fish and Wildlife, Washington State Department of Ecology, and Washington State Department of Natural Resources. For additional information on other agencies with jurisdiction contact ORIA (Office for Regulatory Innovation and Assistance) Monday through Friday, 8:00 a.m. to 5:00 p.m.

D. STATE ENVIRONMENTAL POLICY ACT (SEPA) AND CONCURRENCY

1. Facts: A Determination of Non-significance (DNS) was issued on January 29, 2016. The project passed Traffic Concurrency on January 26, 2016. The appeal period for both SEPA and Concurrency ended on February 12, 2016. No appeals were received. The Environmental Determination and staff memo is included as Attachment 6.

2. Conclusion: The applicant and the City have satisfied the requirements of SEPA and Concurrency.

E. APPROVAL CRITERIA

1. REZONE

   a. Facts:

      (1) Zoning Code section 130.40 states that a quasi-judicial rezone may be approved only if:

         - Conditions have substantially changed since the property was given its present zoning or the proposed rezone implements the policies of the comprehensive plan, and

- The proposed rezone is compatible with the existing land uses in the immediate vicinity of the subject property; and
- The proposed rezone bears a substantial relationship to the public health, safety, or welfare; and
- The proposed rezone is in the best interest of the community of Kirkland; and
- If the rezone is to place or remove an overlay zoning designation on the Zoning Map, the proposal meets the applicable designation criteria of chapters 70 through 80 Zoning Code.

(2) The applicant's response to the criteria is included in Attachment 7.

(3) Historical information regarding annexation, land use designation, and zoning on the subject and adjoining properties includes:

(a) On February 21, 1989, Ordinance 3158 was signed agreeing to the property owners' petition for annexation. The annexation included the entire subject property, Cor-Sun Ranch Estates, and the properties located on the east side of Cor-Sun Ranch Estates and west of Bridle Trails State Park. At that time of annexation the entire area was zoned RS 35.

(b) Sablewood, the adjoining subdivision to the north of the subject property, was originally part of the City of Houghton:

1. On July 3, 1968 the Cities of Houghton and Kirkland consolidated. At the time of consolidation Sablewood had a designated density of 3-7 dwelling units per acre in the Comprehensive Plan and was zoned RM 3.6 (minimum lot size of 3,600 square feet per lot – or approximately 12 units per acre).
2. In 1977, the City revised the Comprehensive Plan designation to 1-3 dwelling units per acre and subsequently rezoned the property to RS 12.5. The property owners sued the City stating that the procedure for rezoning should have been quasi-judicial rather than legislative.
3. On July 6, 1979 the Court determined that the City used the wrong procedure for rezoning, and the property should retain the RM 3.6 zoning designation.
4. After lawsuits, issuance of a Determination of Significance, denial of a proposal due to environmental impacts identified in an Environmental Impact Statement, an appeal of the of proposal, etc. the City started negotiations between the applicants, Cities of Kirkland and Bellevue, King County, the State

Department of Parks and Recreation, Water District #81 and property owners in the vicinity. On October 6, 1986 the property was rezoned to RS 12.5.

5. On May 18, 1987 City Council approved the Sablewood Subdivision and it was recorded on May 29, 1987.

(c) Cor-Sun Ranch Estates, the property the subject property to the south, was already developed when it was annexed into the City of Kirkland in 1989. Based on size alone, most of the lots in Cor-Sun are large enough to have a horse without any special review or process. However, no horses or paddock areas are visible on the aerial maps (see Attachment 8). There are also no horses or paddock areas visible on the aerial maps for Sablewood.

(d) One residential parcel between Cor-Sun Ranch Estates and Bridle Trails State Park shows evidence of a paddock area and active horse use.

In 2008 a stable and paddock area was located on the most southeasterly property between Cor-Sun Ranch Estates and Bridle Trail State Park. It has been demolished and the site is currently unimproved.

(4) The proposed rezone would implement the following Comprehensive Plan policies:

(a) Land Use Policy LU-2.2: Use land efficiently, facilitate infill development or redevelopment, and where appropriate, preserve options for future development.

This land use policy supports a rezone to a maximum of three units per acre as designated on Comprehensive Plan Figure BT-1, the Bridle Trails Land Use Map (see Attachment 9).

(b) Land Use Policy LU-2.3: Ensure an adequate supply of housing units ... to meet the required growth targets through efficient use of land.

The proposal would provide an additional 15 dwelling units based on a calculation of the maximum development potential at 3 units per acre compared to the existing designation at 1 unit per acre (see Section II.F.1).

(c) Land Use Policy LU 4.3: Continue to allow for new residential growth throughout the community, consistent with the basic pattern of land use in the City.

(d) Natural Environment Policy NE-1.8: Strive to minimize human impact on habitat areas.

As discussed in Sections II.E.3-8, if the rezone is approved, multiple existing encroachments into the critical areas and their associated buffers would end and the proposed

project would conform to critical areas regulations. The northern access, which bisects Wetland B, would be reestablished as wetland and the southern access, which is between Wetlands B and C, would become wetland buffer. Additional wetland and buffer mitigation would compensate for new encroachments proposed with the development.

(5) The proposed rezone is compatible with the existing land uses in the immediate vicinity of the subject property since the properties to the north and south are developed with low density residential development. The area to the north of the subject property was developed at a density of 3 dwelling units per acre (RS 12.5 zoning) and the area to the south of the subject property was developed at a density of 1 dwelling unit per acre (RSX 35 zoning). The proposal would actually be developed at a density of 2 dwelling units per acre (35 units / 17.59 acres = 2).

(6) The proposed rezone protects the wetlands and streams and their associated buffer to the maximum extent possible, would remove the northern driveway and restore this area to wetland, preserve the equestrian/pedestrian access to Bridle Trails State Park and provide additional housing stock in a manner consistent with the City's Comprehensive Plan and development regulations.

b. Conclusions: The proposed rezone is consistent with the criteria set forth in section 130.40:

(1) Conditions have substantially changed since the property was given its present zoning; **or** the rezone implements the policies of the Comprehensive Plan. This proposal would implement the Land Use policies supporting infill housing and ensuring an adequate housing supply. It would also implement policies in the Natural Environment element by removing existing non-conforming wetland encroachments and bringing non-conforming wetland buffers into conformance with existing regulations.

(2) The rezone is compatible with existing land uses in the immediate vicinity. The properties to the north are zoned RS 12.5 and the properties to the south are zoned RSX 35. The most compelling reason to retaining the current RS 35 zone would be for the ability for a homeowner to keep a horse on site. All lots located to the south of the subject property, within the City of Kirkland, have lot sizes that exceed 35,000 square feet. Only one of the 40 lots has a paddock area and within the past 10 years another a barn and paddock area was removed.

(3) The rezone bears a substantial relationship to public health, safety, or welfare because the proposal will create infill residential development while meeting the goals and policies of the Comprehensive Plan.

(4) The proposed rezone is in the best interest of the community of Kirkland because it will increase the housing stock helping the City meet its housing targets while protecting the stream and wetlands to the maximum extent possible.

(5) The rezone will not place or remove an overlay zoning designation on the Zoning Map.

2. PRELIMINARY PLAT AND GENERAL ZONING CODE APPROVAL CRITERIA

a. Facts: Municipal Code section 22.12.230 states that the Hearing Examiner may recommend approval of a proposed plat only if:

(1) There are adequate provisions for open spaces, drainage ways, rights-of-way, easements, water supplies, sanitary waste, power service, parks, playgrounds, and schools; and

(2) It will serve the public use and interest and is consistent with the public health, safety, and welfare. The Hearing Examiner shall be guided by the policy and standards and may exercise the powers and authority set forth in RCW 58.17.

(3) Zoning Code section 152.70.3 states that a Process IIB application may be approved if it is consistent with the all applicable development regulations, including but not limited to the Zoning Code and Subdivision Code, and it is consistent with the public health, safety, and welfare.

b. Conclusion: The proposal complies with Municipal Code section 22.12.230 and Zoning Code section 152.70.3. It is consistent with the Comprehensive Plan (see Section II.G). With the recommended conditions of approval, it is consistent with the Zoning Code and Subdivision regulations (see Sections II.E & II.F) and there are adequate provisions for open spaces, drainage ways, rights-of-way, easements, water supplies, sanitary waste, power service, parks, playgrounds, and schools. It will serve the public use and interest and is consistent with the public health, safety, and welfare because it will add housing stock to the City of Kirkland in a manner that is consistent with applicable development regulations.

3. CRITICAL AREAS (STREAM AND WETLAND)

a. Facts:

(1) The subject property is located in a Primary Basin as defined by Zoning Code section 90.30.10. The basin type and feature classification determine the buffer width associated with streams and wetlands.

(2) The applicant has requested a number of critical area modifications in order to provide access to the property and for handling storm water. These are outlined in sections II.E.4 through II.E.8, below.

(3) As required by the Zoning Code, the applicant submitted a Critical Areas Report and Mitigation Plan, prepared by Kyle Legare of Wetlands Solutions, Inc. The original report was subsequently modified and resubmitted. Only the final version is attached to this report (see Attachment 10).

(4) The Watershed Company, the City's stream and wetland consultant, reviewed all versions of the applicant's report. The final version was reviewed and approved in a letter dated November 25, 2015 (see Attachment 11).

(5) Zoning Code section 90.145 establishes the requirement for the applicant to submit a performance or maintenance bond to ensure compliance with any aspect of the Drainage Basin regulations contained in Chapter 90 of the Kirkland Zoning Code or any decision or determination made pursuant to the chapter.

b. Conclusions: The Watershed Company (TWC) has reviewed the final version of the Critical Areas Report and Mitigation Plan dated November 6, 2015 and determined that the proposal meets the established criteria for an improvement or land surface modification as explained in Sections II.E.4 through II.E.8. The proposed development is consistent with the approval criteria, as long as the following conditions are met:

(1) As part of the land surface modification permit application, the applicant should submit development plans that incorporate the Critical Areas Report and Mitigation Plan and submit a bond to assure that the work will be completed

(2) Prior to final inspection of the land surface modification permit, the applicant should:

(a) Complete installation of approved Critical Areas Report and Mitigation Plan, subject to inspection by the City's consultant at the applicant's expense.

(b) Provide proof of a written contract with a qualified professional who will perform the monitoring program, together with a completed contract and fees to fund review of the monitoring and maintenance activities, (i.e. inspection of plant materials, annual monitoring reports or revegetation activities) by the City's consultant. Alternatively, the applicant should provide a copy of a completed contract and fees to fund completion of the monitoring program by the City's consultant.

(c) Provide proof of a written contract to cover maintenance activities outlined in the Critical Areas Report and Mitigation Plan.

4. MODIFICATION OF A WETLAND

a. Facts:

(1) The applicant is proposing to fill and "paper" fill wetlands located along the west property line (see Attachment 10, Sheets M-1 and

M-2) in order to provide a new access road to the proposed development.

Filling a wetland is exactly as it sounds; there will be actual fill placed in the wetland. When "paper" fill occurs no actual fill is placed in a wetland. Rather, "paper" fill is used when the need to reduce a wetland buffer by more than the maximum one-third allowed through a buffer modification can only be accomplished by reclassifying part of the actual wetland as buffer. The applicant is proposing to fill 1,253 s.f. and "paper" fill 2,448 s.f. of Wetland C. They are also proposing to fill 251 s.f. of Wetland B along 116th Avenue NE.

Currently the subject property is served by two driveways from 116th Avenue NE, Both of these driveways are located next to the existing wetlands (see Attachment 10, Sheet M-1). The applicant is proposing to remove the northern driveway and re-establish the wetland in that area. The southern driveway will also be restored as a wetland buffer (see Attachment 10, Sheet M-5).

(2) Zoning Code section 90.55.2 establishes ten decisional criteria for approving an improvement or land surface modification in a Type 2 wetland.

- It will not adversely affect water quality.
- It will not adversely affect fish, wildlife, or their habitat.
- It will not have an adverse effect on drainage and/or storm water detention capabilities.
- It will not lead to unstable earth conditions or create erosion hazard or contribute to scouring actions.
- It will not be materially detrimental to any other property or to the City as a whole.
- It will result in a land surface modification of no more than ten percentof the wetland on the subject property.
- Compensatory mitigation is provided in accordance with the table in subsection (4) of this section.
- Fill material does not contain organic or inorganic material that would be detrimental to water quality or fish and wildlife habitat.
- All exposed areas are stabilized with vegetation normally associated with native wetland buffers, as appropriate.
- There is no practicable or feasible alternative development proposal that results in less impact to the wetland or its buffer.

(3) The applicant's critical areas report addresses the approval criteria (see Attachment 10, starting on Page 14).

(4) The Watershed Company has reviewed the final version of the Critical Areas Report and Mitigation Plan and determined that the application meets the established criteria for an improvement or land surface modification in a Type 2 wetland.

(5) Zoning Code section 90.55.2 restricts the total wetland impacts to ten percent of a Type 2 wetland located on the subject property. The proposal will impact two distinct wetlands. All proposed wetland impacts are due to access and City required right-of-way improvements.

Wetland B has 27,593 s.f. on the subject property, ten percent of the Wetland B equals 2,759 s.f., and the total impact to Wetland B equals 251 s.f., which is below the allowable ten percent.

Wetland C has 3,792 s.f. on the subject property, 10 percent of Wetland C is 379 square feet. Total impacts to Wetland C are 3,701 s.f., which exceeds the allowable ten percent.

On April 1, 2015 Interpretation #15-02 was issued and became effective after the 15 day appeal period expired (see Attachment 12). This interpretation determined that the wetland modification limitations of 90.55.2.a shall not apply when the following criteria are met:

(a) Maximum Development Potential calculation of Zoning Code section 90.135 allows multiple dwelling units on the subject property (see Section II.F.1); and

(b) There is enough developable land on the property to accommodate multiple units; and

(c) Access to the developable portion of the property would be prohibited due to the limitations on the amount of wetland that may be modified pursuant to Zoning Code section 90.55; and

(d) The remaining approval criteria and process requirements of Zoning Code section 90.55 shall continue to apply.

b. <u>Conclusion</u>: The project complies with all of the criteria for wetland modification, including Interpretation #15-2.

5. MODIFICATION OF A WETLAND BUFFER

a. <u>Facts</u>:

(1) Zoning Code section 90.60.2(b) states that a wetland buffer cannot be reduced by more than one-third of the standard buffer width. An additional 10-foot buffer setback is required through Zoning Code Section 90.50.

(2) The applicant is proposing to reduce the wetland buffer on the south side of Wetland B the maximum one-third allowed, from 75 feet to 50 feet, to provide the required road improvements. The reduced buffer line and 10-foot buffer setback line are shown on the applicant's plans (see Attachment 10, Sheet M-2).

(3) Zoning Code section 90.60.2.b establishes nine decisional criteria for approving an improvement or land surface modification in a Type 2 wetland.

- It is consistent with Kirkland's Streams, Wetlands and Wildlife Study (The Watershed Company, 1998) and the Kirkland Sensitive Areas Regulatory Recommendations Report (Adolfson Associates, Inc. 1998).
- It will not adversely affect water quality.
- It will adversely affect fish, wildlife, or their habitat.
- It will not have an adverse effect on drainage and/or storm water detention capabilities.
- It will not lead to unstable earth conditions or create erosion hazards.
- It will not be materially detrimental to any other property or to the City as a whole.
- Fill material does not contain organic or inorganic material that would be detrimental to water quality or to fish, wildlife, or their habitat.
- All exposed areas are stabilized with vegetation normally associated with native wetland buffers, as appropriate.
- There is no practicable or feasible alternative development proposal that results in less impact to the buffer.

(4) The applicant's response to the criteria is included as Attachment 10, starting on Page 16.

(5) The Watershed Company has reviewed the final version of the Critical Areas Report and Mitigation Plan and determined that the application meets the established criteria for an improvement or land surface modification in a Type 2 wetland buffer.

b. Conclusion: The project complies with all of the criteria for wetland buffer modification.

6. WATER QUALITY FACILITIES (BIOSWALE)

a. Facts:

(1) Zoning Code section 90.45.4 states that a water quality facility (bioswale) may be located within the outer one-half of a wetland buffer.

(2) The applicant is requesting to install a bioswale on the south side of the access road to collect and treat road stormwater adjacent to the proposed access road prior to discharging the stormwater to the wetland buffer.

(3) Zoning Code section 90.45.4 establishes eight decisional criteria for approving a water quality facilities to be located within the outer one-half of a wetland buffer.

- It will not adversely affect water quality;
- It will not adversely affect fish, wildlife, or their habitat;
- It will not adversely affect drainage or storm water detention capabilities;
- It will not lead to unstable earth conditions or create erosion hazards or contribute to scouring actions;
- It will not be materially detrimental to any other property in the area of the subject property or to the City as a whole, including the loss of significant open space or scenic vistas;
- The existing buffer is already degraded as determined by a qualified professional;
- Its installation would be followed immediately by enhancement of an area equal in size and immediately adjacent to the affected portion of the buffer; and
- Once installed, it would not require any further disturbance or intrusion into the buffer.

(4) The applicant's response to the criteria is included as Attachment 10, starting on Page 19.

(5) The Watershed Company has reviewed the final version of the Critical Areas Report and Mitigation Plan and determined that the application meets the established criteria for installing a stormwater outfall into the outer half of the wetland buffer.

b. Conclusion: The project complies with all of the criteria for installing a stormwater quality facility into the wetland buffer.

7. STORMWATER OUTFALLS THROUGH A WETLAND BUFFER

a. Facts:

(1) Zoning Code section 90.45.3 states that piped discharge of storm water may be located within the wetland buffer.

(2) The applicant is requesting to discharge stormwater from a vault using a piped system close to the edge of the wetland buffer (see Attachment 10, Sheet M-2).

(3) Zoning Code section 90.45.3 establishes five decisional criteria for approving a piped storm water outfall within the buffer providing that surface discharge of storm water through the buffer would clearly pose a threat to slope stability, and if the storm water outfall will not:

- Adversely affect water quality;
- Adversely affect fish, wildlife, or their habitat;
- Adversely affect drainage or storm water detention capabilities;

- Lead to unstable earth conditions or create erosion hazards or contribute to scouring actions; and
- Be materially detrimental to any other property in the area of the subject property or to the City as a whole, including the loss of significant open space or scenic vistas.

(4) The applicant's response to the criteria is included as Attachment 10, starting on Page 20.

(5) The Watershed Company has reviewed the final version of the Critical Areas Report and Mitigation Plan and determined that the application meets the established criteria for using a piped system for discharging stormwater into the wetland buffer.

b. Conclusion: The project complies with all of the criteria for using a piped system for discharging stormwater into the wetland buffer.

8. PLACEMENT OF A STREAM IN A CULVERT FOR AN ACCESS DRIVE/DRIVEWAY/STREET

a. Facts:

(1) Zoning Code section 90.115.1 states that a stream may be placed in a culvert when necessary to provide required vehicular, pedestrian, or utility access to the subject property.

Convenience to the applicant to facilitate general site design shall not be considered.

(2) The applicant is requesting to install a culvert to provide vehicular, pedestrian, and utility access to the subject property.

(3) Zoning Code section 90.115 establishes six decisional criteria for allowing a stream to be put in a culvert.

- Placing the stream in a culvert is necessary to provide required vehicular, pedestrian, or utility access to the subject property. Convenience to the applicant in order to facilitate general site design shall not be considered.
- There will be no adverse impact to water quality.
- There will be no adverse impact to fish, wildlife, and their habitat.
- There will be no increase in the velocity of stream flow, unless approved by the Planning Official to improve fish habitat.
- There will be no decrease in flood storage volumes.
- Neither the installation, existence, nor operation of the culvert will lead to unstable earth conditions or create erosion hazards.
- Neither the installation, existence, nor operation of the culvert will be detrimental to any other property in the area or to the City as a whole.

(4) The applicant's response to the criteria is included as Attachment 10, starting on Page 17.

(5) The Watershed Company has reviewed the final version of the Critical Areas Report and Mitigation Plan and determined that the application meets the established criteria for installing a culvert to provide vehicular, pedestrian and utility access to the subject property.

b. Conclusion: The project complies with all of the criteria for placing a stream in a culvert. The proposed location of the new access road is the only location that will provide access while complying with the critical areas regulations.

F. DEVELOPMENT REGULATIONS

1. Maximum Development Potential

a. Facts:

(1) Zoning Code section 90.135 provides that the maximum potential number of dwelling units for a site which contains a stream(s), wetland(s), and associated buffers shall be the buildable area in square feet divided by the maximum lot area per unit as specified in Zoning Code Chapters 15 through 60, plus the required stream buffer area in square feet divided by the minimum lot area as specified in Zoning Code chapters 15 through 60, multiplied by the development factor from Subsection 2 of Zoning Code section 90.135.

(2) The following is the maximum development potential calculation for property if the rezone to RS 12.5 is approved:

Total property size.....766,131 s.f.
Unmodified Sensitive Area.....47,628 s.f.
Unmodified Sensitive Area Buffer.....86,015 s.f.
Percentage of Site in Wetland Buffer 11%
Minimum Lot Size .....12,500 s.f.
Development Factor (see KZC section 90.135.2).....90%
Maximum Development Potential.....56 Lots

(3) Calculating the maximum development potential under the current RS/RSX 35 zoning would result in 20 lots.

(4) The applicant is proposing 35 lots for single family residences.

b. Conclusion: The proposed development is consistent with the Maximum Development Potential allowed, assuming the rezone to RS 12.5 is approved.

2. General Lot Layout and Site Development Standards

a. Facts:

(1) Municipal Code section 22.28.030 requires all lots to meet the minimum size requirements established for the property in the Kirkland Zoning Code or other regulatory documents.

(2) Municipal Code section 22.28.050 states that lots must be of a shape so that reasonable use and development may be made of the lot. Generally, the depth of the lot should not be more than twice the width of the lot. In no case should a lot be less than fifteen feet in width where it abuts the right-of-way, vehicular access easement or tract providing vehicular access to subject lot.

(3) Municipal Code section 22.28.070 states that, generally, blocks should not exceed five hundred feet in length.

(4) The fundamental site development standards pertaining to single-family development in the RS and RSX zones are set forth in Zoning Code chapter 15.

(5) The proposed lots range in size from 12,506 square feet to 24,752 square feet.

a. Conclusion: Assuming that the proposed rezone is approved, the proposal complies with the regulations as set forth in Municipal Code section 22.28.050, 070 and 080 and Zoning Code chapter 15.

3. Natural Features - Significant Vegetation

a. Facts:

(1) Regulations regarding the retention of trees can be found in Chapter 95 of the Kirkland Zoning Code. The applicant has proposed phased review, pursuant to Section 95.30.6.a because the location of all improvements has not been established.

(2) The applicant submitted an arborist report and preliminary tree retention plan (see Attachment 13). The applicant is required to retain all viable trees on the site following the subdivision approval. Tree removal will be considered at the land surface modification and building permit stages of development.

(3) Prior to submittal of the plat the City's Arborist reviewed the Arborist report, visited the site, and prioritized trees that the applicant should work towards retaining. The applicant is proposing to retain the majority of the trees identified by the City's Arborist (see Attachment 13, Sheet 11 of 13).

b. Conclusion: The applicant should retain all viable trees during the construction of plat improvements and residences and comply with the specific recommendations of the City's Arborist.

4. Provisions for Public and Semi-Public Land

a. Facts:

(1) Municipal Code section 22.28.020 states that the City may require dedication of land for school sites, parks and open space, rights-of-way, utilities infrastructure, or other similar uses if this is reasonably necessary as a result of the subdivision.

(2) Zoning Code Chapter 105.10.1.b establishes that for five or more detached dwelling units a dedicated and improved public right of

way is required Zoning Code Chapter 110 establishes right-of-way improvement requirements.

(3) Zoning Code section 110.60 states that the Public Works Director may require the applicant to make land available, by dedication, for new rights-of-way and utility infrastructure if this is reasonably necessary as a result of the development activity.

(4) The subject property fronts along 116th Avenue NE. The Public Works Department states that that dedication of a new right of way is necessary to provide access within the project (see Attachment 3). A new 45 foot wide interior access right of way is required to serve the proposed lots.

b. Conclusion: The proposal is in compliance with Municipal Code section 22.28.020 and Zoning Code sections 105.10.1.b, 110.60, if the applicant dedicates the right of way required by Public Works to the City of Kirkland.

5. Right-of-Way Improvements

a. Facts: Municipal Code section 22.28.090 requires the applicant to comply with the requirements of Chapter 110 of the Zoning Code with respect to dedication and improvement of adjacent right-of-way.

(1) Sections 110.10 and 110.25 require the applicant to make half street improvements in rights-of-way abutting the subject property. The subject property abuts 116th Avenue NE which is shown on the City Rights-of-Way Designation Map as a collector.

(a) Zoning Code section 110.40 establishes that a collector must be improved with: 11 foot wide northbound driving lane, 5 foot wide northbound bike lane, curb and gutter, 4.5 foot planter strip with street trees 30 feet on center, and 5 foot wide sidewalk.

(b) Currently, 116th Avenue NE is improved with approximately 25 feet of pavement and gravel shoulders.

(c) Section 110.70.3 establishes the authority of the City to require or grant a modification of normal right-of-way requirements. The City may require or grant a modification to the nature or extent of any required improvement for any of the following reasons:

1. If the improvement as required would not match the existing improvements.

2. If unusual topographic or physical conditions preclude the construction of the improvements as required.

3. If other unusual circumstances preclude the construction of the improvements as required.

4. If the City and a neighborhood has agreed upon a modified standard for a particular street (see the Public Works Pre-Approved Plans and Policies Notebook for a description of the Neighborhood Access Street

Improvement Modification and Waiver Process).

(d) The Public Works Department has recommended a modification to requirements of Section 110.40 for 116th Avenue NE that would not require landscape strip or street trees given the proximity of the wetland. They have recommended that the street be widened to 16 feet from centerline to face of curb to provide an 11 foot wide northbound lane and a 5 foot wide northbound bike lane, storm drainage collection and conveyance, and an 8 to 10 foot wide soft path with surface material suitable for pedestrians and equestrians be installed.

(e) The proposed improvements would match existing right of way improvements to the south in the City of Bellevue while providing bicycle, equestrian, pedestrian access. It would also minimize impacts to the wetland and/or its associated buffer immediately adjacent to the 116th Avenue NE right of way.

(2) A new interior access road is required to be dedicated to serve the new lots.

(a) The Public Works Department, based on Zoning Code section 110.35, has classified this street as an R-24 Neighborhood Access street. Standard improvements for this type of street are: 45 ft. wide right of way dedication, 24 ft. wide pavement, vertical curb and gutter, storm drainage, 4.5 ft. wide landscape strips with street trees between the curb and the sidewalks, 5 ft. wide sidewalks.

(b) Zoning Code section 110.70.3 establishes the authority of the City to require or grant a modification of normal right-of-way requirements. The City may require or grant a modification to the nature or extent of any required improvement for any of the following reasons:

1. If the improvement as required would not match the existing improvements.
2. If unusual topographic or physical conditions preclude the construction of the improvements as required.
3. If other unusual circumstances preclude the construction of the improvements as required.
4. If the City and a neighborhood has agreed upon a modified standard for a particular street (see the Public Works Pre-Approved Plans and Policies Notebook for a description of the Neighborhood Access Street Improvement Modification and Waiver Process).

(c) Public Works recommends that where this new road crosses the stream and wetland near the west side of the site, that a 5 foot wide sidewalk with no landscape strip be

installed only on one side of the street (currently depicted on the north side).

(d) Installation of the standard improvements would cause significant grading impacts on the wetland and can be categorized as an unusual physical condition that preclude the construction of the improvements.

b. Conclusions:

(1) The application meets the criteria for a modification of the right-of-way improvement requirements for 116th Avenue NE located next to the wetland and its associated buffer.

(2) The application meets the criteria for a modification of the right-of-way improvement requirements for the proposed new access road where it bisects the wetland and wetland buffers.

(3) The applicant should dedicate a 45 foot wide access road to serve the new lots.

6. Access – Walkways

a. Facts: Municipal Code section 22.28.170 establishes that the City may require the installation of pedestrian walkways by means of dedicated rights-of-ways, tracts, or easements if a walkway is indicated as appropriate in the comprehensive plan, if it is reasonably necessary provide efficient pedestrian access to a designated activity center of the city, or if blocks are unusually long.

(1) Municipal Code section 22.28.070 states that blocks that are more than 750' in length should allow for midblock pedestrian access.

(2) The subject property is 654 feet long along the east property line and Bridle Trails State Park is located immediately to the east. Two access points to the park are currently located along the east side of the subject property. The southern one is recorded under 198810071403.

(3) The proposed plans show a ten foot wide equestrian easement to Bridle Trails State Park between Lots 9 and 10 (Attachment 2, Sheet 11). The trail should be designated as an equestrian/pedestrian easement and be improved with an eight foot wide surface meeting equestrian standards (see Attachment 3).

(4) The neighborhood plan states:Existing equestrian access to Bridle Trails State Park from this area should be preserved (see Bridle Trail Neighborhood Plan Page XV.C-4).Equestrian and pedestrian access to the parks should be made available from adjacent properties where appropriate and feasible. Signing which identifies access to the parks should be provided (see Bridle Trail Neighborhood Plan Page XV.C-7).

b. Conclusion: The applicant should provide a ten foot wide

equestrian/pedestrian easement to Bridle Trail State Park between Lots 9 and 10 as supported by the Bridle Trail Neighborhood Plan.

7. Save Harmless Agreement – Wetland/Stream

   a. Fact: Zoning Code 90.155 establishes that prior to issuance of a land surface modification permit or a building permit, whichever is issued first, the applicant shall enter into an agreement with the City that runs with the property, in a form acceptable to the City Attorney, indemnifying the City from any claims, actions, liability and damages to sensitive areas arising out of development activity on the subject property (see Attachment 13). The applicant shall record this agreement with the King County Department of Elections and Records.

   b. Conclusion: Prior to issuance of a land surface modification permit or a building permit, whichever is issued first, the applicant should enter into an agreement with the City that runs with the property, in a form acceptable to the City Attorney, indemnifying the City from any claims, actions, liability and damages to sensitive areas arising out of development activity on the subject property.

8. Natural Greenbelt Protection Easement

   a. Fact: Zoning Code section 90.150 requires that the applicant dedicate development rights, air space, or grant a greenbelt protection or open space easement to the City to protect sensitive areas and their buffers (see Attachment 14).

   b. Conclusion: As part of the final plat recording, the applicant should dedicate a natural greenbelt protection easement encompassing the wetlands, streams and their associated buffer on the site. The boundaries of the Natural Greenbelt Protection Easement should be established by survey. All surveys shall be located on KCAS or plat bearing system and tied to known monuments.

9. Wetland/Stream Buffer Fence or Barrier

   a. Facts:

      (1) Zoning Code sections 90.50 and 90.95 require that prior to the start of development activities, the applicant install a six-foot high construction-phase chain link fence or equivalent fence, as approved by the Planning Official, along the upland boundary of the entire wetland/stream buffer with silt screen fabric installed per City standard.

      (2) Zoning Code sections 90.50 and 90.95 require the applicant to install either (1) a permanent three- to four-foot-tall split rail fence; or (2) permanent planting of equal barrier value; or (3) equivalent barrier, as approved by the Planning Official between the upland boundary of the wetland/stream buffer and the developed portion of the site.

   b. Conclusions:

(1) As part of the land surface modification permit application, the applicant should submit erosion control plans, which depict the location of a six-foot high construction phase fence along the boundary of the entire wetland/stream buffer with silt screen fabric installed per City standard. The fencing should be installed prior to issuance of any permits. The fence should remain upright in the approved location for the duration of development activities.

(2) Prior to final inspection of the land surface modification permit, the applicant should install a permanent 3 to 4 foot tall split rail fence between the boundary of the wetland/stream buffer and the developed portion of the site.

10. Bonds and Securities – Improvements

a. Facts:

(1) Municipal Code section 22.32.080 states that in lieu of installing all required improvements and components as part of a plat or short plat, the applicant may propose to post a bond for a period of one year to ensure completion of these requirements within one year of the decision approving the plat or short plat.

(2) Zoning Code section 175.10.2 establishes the circumstances under which the City may consider the use of a performance security in lieu of completion of certain site work prior to occupancy. The City may consider a performance security only if: the inability to complete work is due to unavoidable circumstances beyond the control of the applicant; there is certainty that the work can be completed in a reasonable period of time; and occupancy prior to completion will not be materially detrimental to the City or properties adjacent to the subject site.

b. Conclusions:

(1) Site and right-of-way improvements required as a result of the plat should be completed prior to recording, unless a security device to cover the cost of installing the improvements and guaranteeing installation within one year of the date of final plat approval is submitted.

(2) In order to ensure timely completion of all required site and right-of-way improvements, such improvements should be completed prior to occupancy, unless the applicant can demonstrate compliance with the criteria in Zoning Code section 175.10.2.

G. COMPREHENSIVE PLAN

1. Facts: The subject property is located within the Bridle Trail neighborhood.

a. Figure BT-1 on Page XV.C-2 of the neighborhood plan designates the subject property as appropriate for low density residential development, 1-3 dwelling units per acre (see Attachment 8). Table LU-3 identifies RS 12,500 and RS 35,000 as the comparable zoning classification for these densities. The applicant is proposing to rezone the property from RS 35

to RS 12.5 and create lots ranging in size from 12,506 s.f. to 24,752 s.f.

b. The Living Environment section of the Bridle Trails Neighborhood (Page XV.C.4) states: *Low-density development and equestrian facilities should be permitted along 116th Avenue NE southwest of Bridle Trails State Park. Southwest of Bridle Trails State Park and adjacent to 116th Avenue NE is an area which contains low density residential development (one to three dwelling units per acre) and large stable facilities. Existing equestrian access to Bridle Trails State Park from this area should be preserved.*

2. Conclusion: The proposed use of the subject property is consistent with the Comprehensive Plan.

H. DEVELOPMENT STANDARDS

1. Fact: Additional comments and requirements placed on the project are found on the Development Standards, Attachment 3.

2. Conclusion: The applicant should follow the requirements set forth in Attachment 3.

III. SUBSEQUENT MODIFICATIONS

Modifications to the approval may be requested and reviewed pursuant to the applicable modification procedures and criteria in effect at the time of the requested modification.

IV. CHALLENGES AND JUDICIAL REVIEW

The following is a summary of the deadlines and procedures for challenges. Any person wishing to file or respond to a challenge should contact the Planning Department for further procedural information.

A. CHALLENGE

Section 152.85 of the Zoning Code allows the Hearing Examiner's recommendation to be challenged by the applicant or any person who submitted written or oral comments or testimony to the Hearing Examiner. A party who signed a petition may not challenge unless such party also submitted independent written comments or information. The challenge must be in writing and must be delivered, along with any fees set by ordinance, to the Planning Department by 5:00 p.m., _____, seven (7) calendar days following distribution of the Hearing Examiner's written recommendation on the application. Within this same time period, the person making the challenge must also mail or personally deliver to the applicant and all other people who submitted comments or testimony to the Hearing Examiner, a copy of the challenge together with notice of the deadline and procedures for responding to the challenge.

Any response to the challenge must be delivered to the Planning Department within seven (7) calendar days after the challenge letter was filed with the Planning Department. Within the same time period, the person making the response must deliver a copy of the response to the applicant and all other people who submitted comments or testimony to the Hearing Examiner.

Proof of such mail or personal delivery must be made by affidavit, available from the Planning Department. The affidavit must be attached to the challenge and response letters, and delivered to the Planning Department. The challenge will be considered by the City Council at the time it acts upon the recommendation of the Hearing Examiner.

B. JUDICIAL REVIEW

Section 152.110 of the Zoning Code allows the action of the City in granting or denying this zoning permit to be reviewed in King County Superior Court. The petition for review must be filed within twenty-one (21) calendar days of the issuance of the final land use decision by the City.

V. LAPSE OF APPROVAL

Under KMC 22.16.010 Final Plat – Submittal – Time limits: If the Final Plat is not submitted to the City Council within the time limits set forth in RCW 58.17.140 it shall be void.

VI. APPENDICES

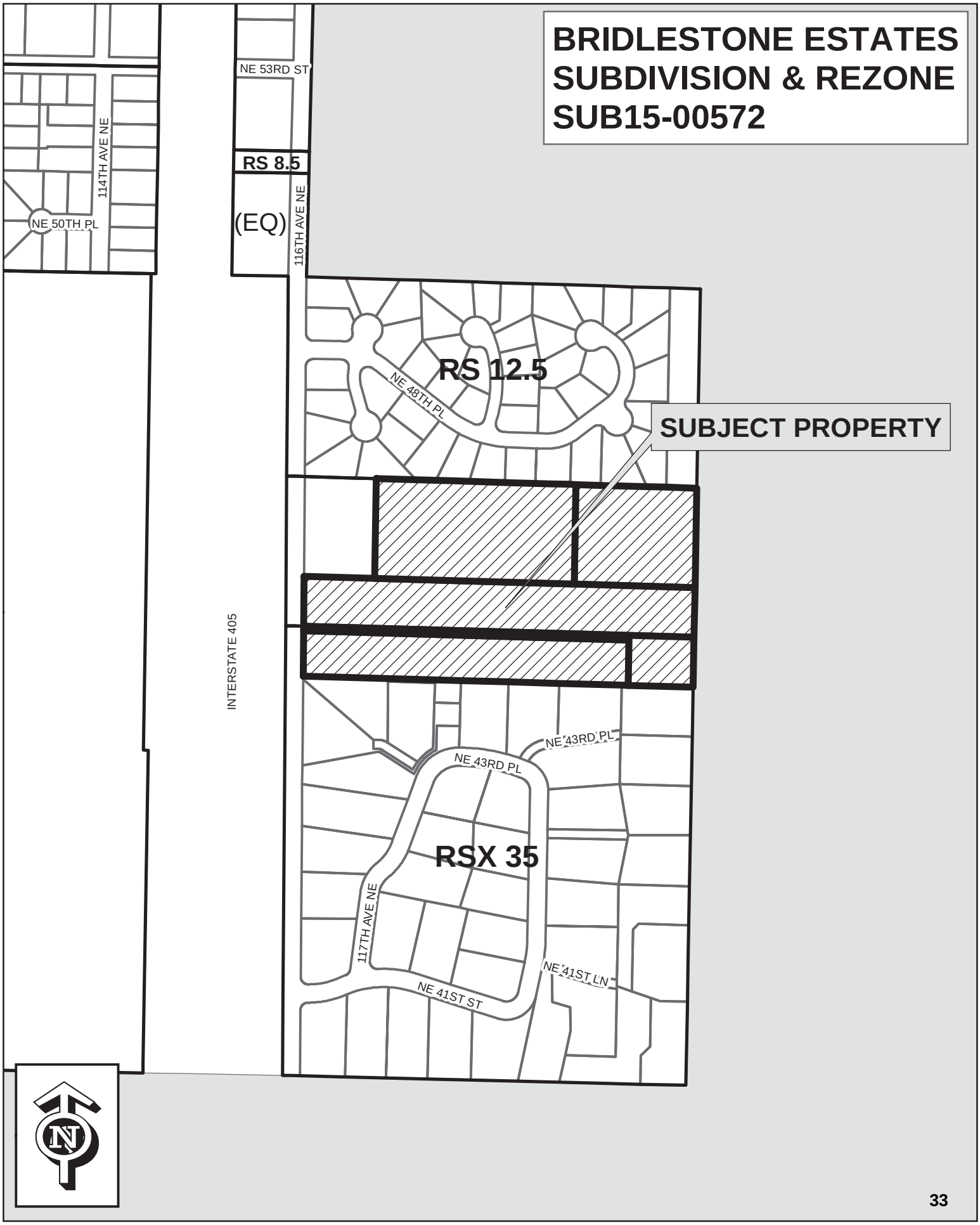
Attachments 1 through 16 are attached.

1. Vicinity Map
2. Development Plans
3. Development Standards
4. Geotechnical Report by Liu & Associates, Inc.
5. Public Comments
6. SEPA Determination and Memo
7. Applicant's response to the rezone approval criteria
8. Aerial Photos of Sablewood, Subject Property, and Cor-Sun Ranch Estates
9. Bridle Trails Neighborhood Land Use Map
10. Final Critical Areas Report and Mitigation Plan by Wetland Solutions, Inc.
11. The Watershed Company final review letter
12. Interpretation 15-2
13. Arborist Report by Kyle Legare
14. Save Harmless Agreement – Wetland
15. Natural Greenbelt Protective Easement
16. 16 Geologically Hazardous Covenant
17. IDP Tree Plan Comments to Applicant

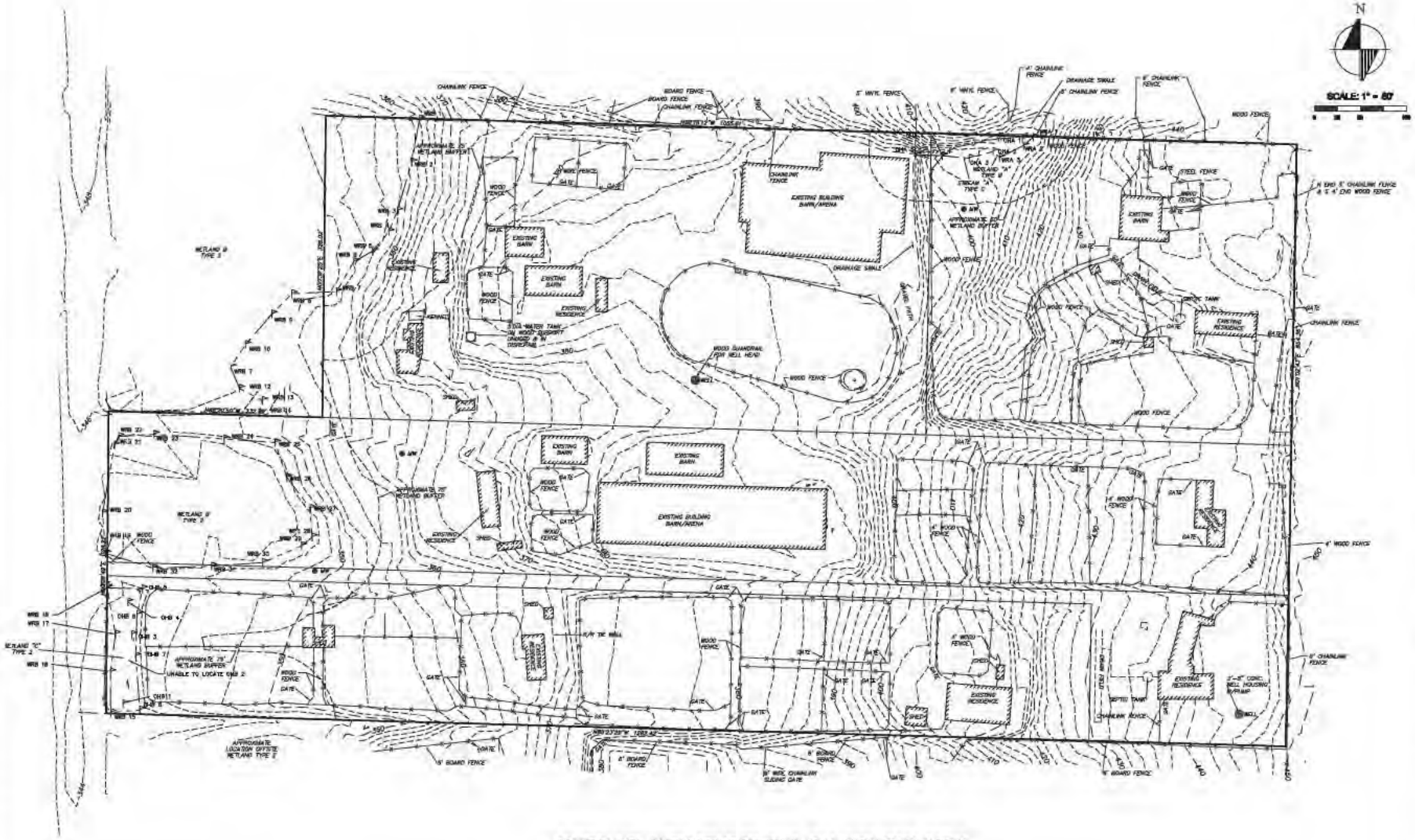
VII. PARTIES OF RECORD

Applicant: Cher Anderson, KLN Construction, Inc. 19000 33rd Avenue @, #200, Lynwood, WA 98036
Parties of Record
Planning and Building Department
Department of Public Works

A written recommendation will be issued by the Hearing Examiner within eight calendar days of the date of the open record hearing. Pursuant to Zoning Code 152.70.2.a, the applicant has agreed in writing to an extension of this time limit.


BRIDLESTONE ESTATES
SUBDIVISION & REZONE
SUB15-00572
NE 53RD ST
114TH AVE NE
NE 50TH PL
RS 8.5
(EQ)
116TH AVE NE
RS 12.5
NE 48TH PL
SUBJECT PROPERTY
INTERSTATE 405
NE 43RD PL
NE 43RD PL
RSX 35
117TH AVE NE
NE 41ST LN
NE 41ST ST
N

POR. NW 1/4, SW 1/4, SEC. 16, TWP. 25 N., RGE. 5 E., W.M.



PROPERTY LINES, EXISTING STRUCTURES, FOUND WELLS, KNOWN SEPTIC SYSTEMS, FENCES, WETLAND FLAGS, APPROXIMATE 75' WETLAND BUFFERS AND CONTOURS

triad

TOPOGRAPHIC SURVEY FOR
KLN CONSTRUCTION, INC.
BRIDLESTONE ESTATES
CITY OF KIRKLAND, WASHINGTON

13-097

3 of 14

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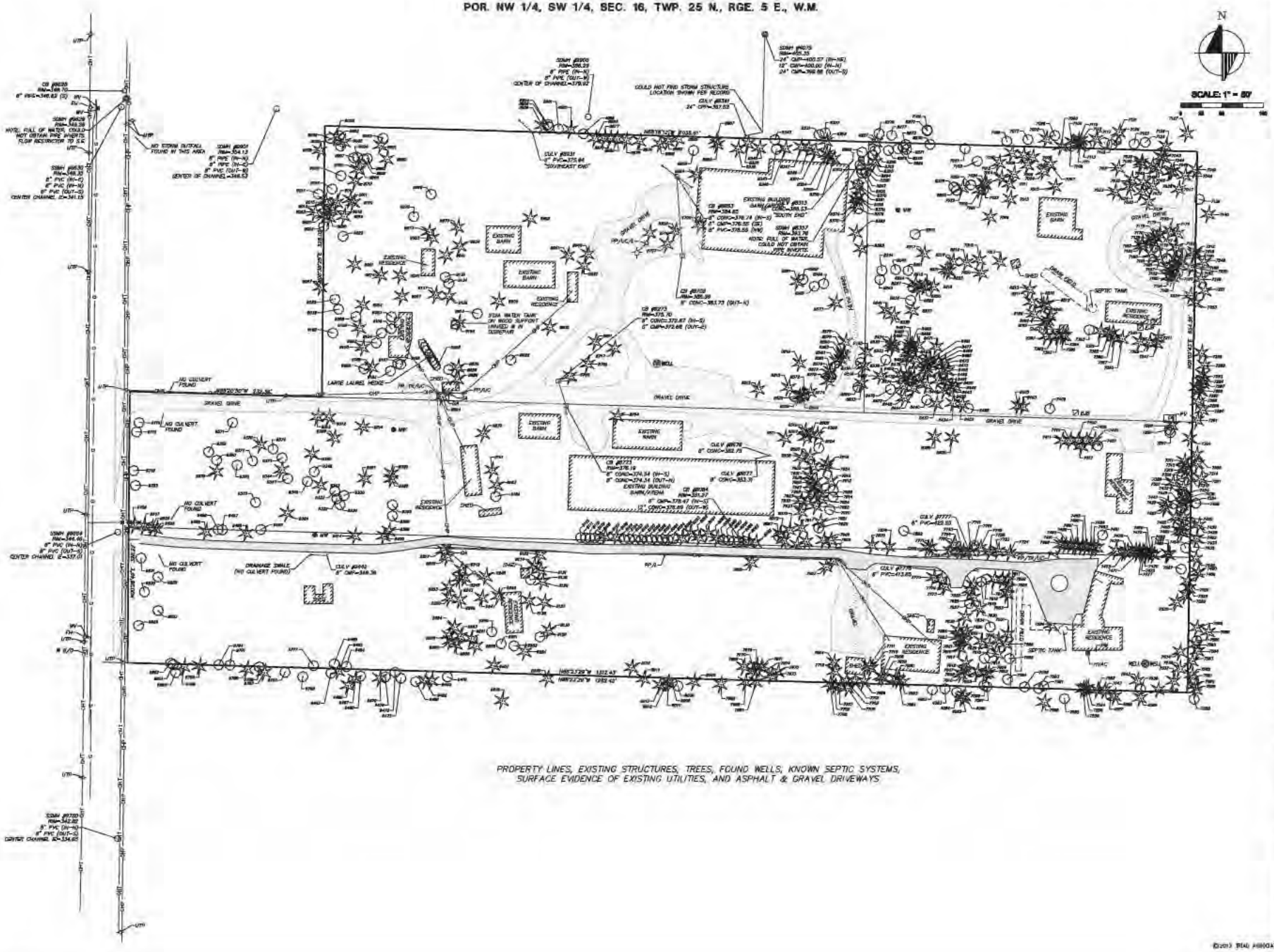

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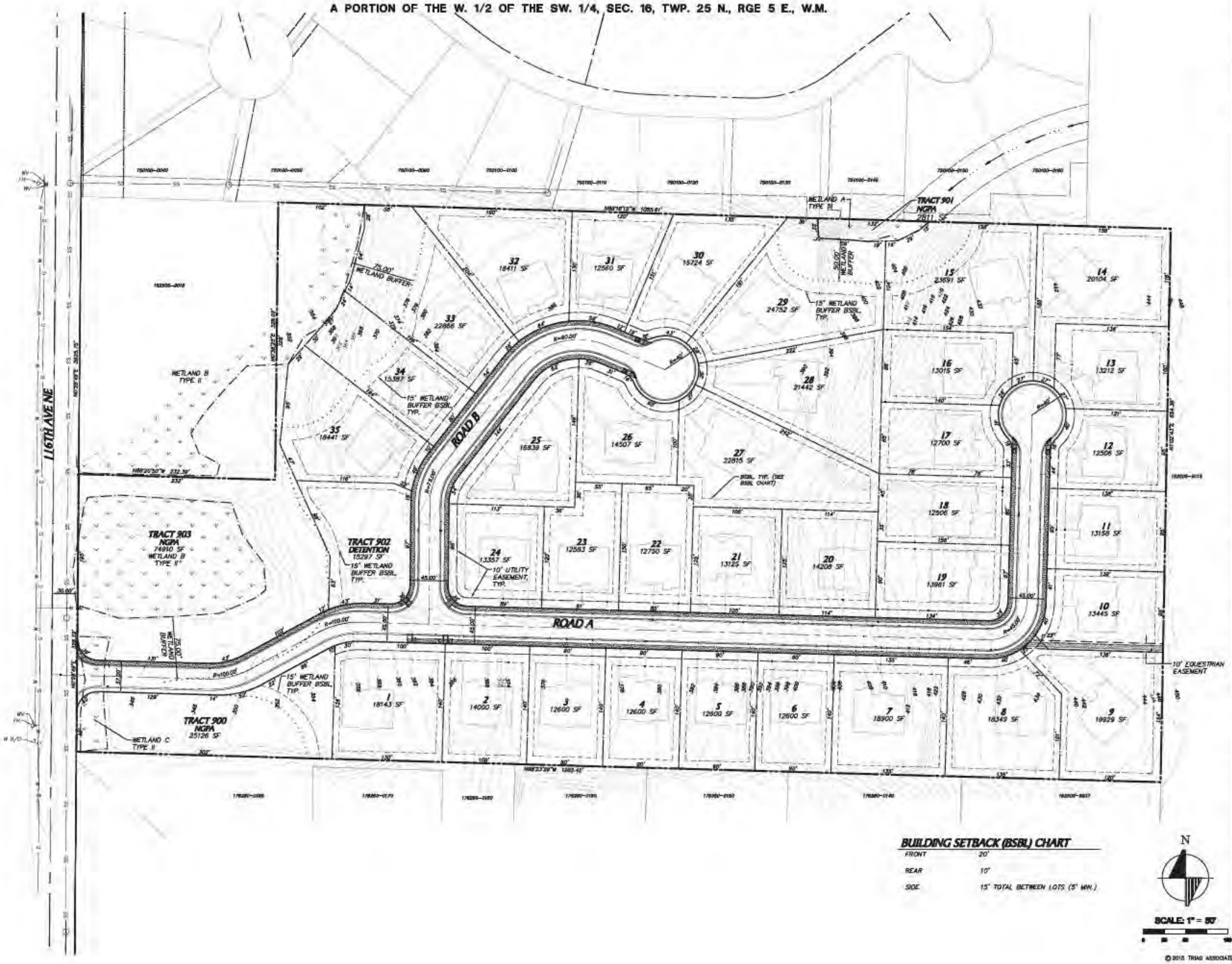
TOPOGRAPHIC SURVEY FOR
KLN CONSTRUCTION, INC.
BRIDLESTONE ESTATES
CITY OF KIRKLAND, WASHINGTON

13-097

4 of 14

A PORTION OF THE W. 1/2 OF THE SW. 1/4, SEC. 16, TWP. 25 N., RGE 5 E., W.M.



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PRELIMINARY PLAT

KLN CONSTRUCTION, INC.

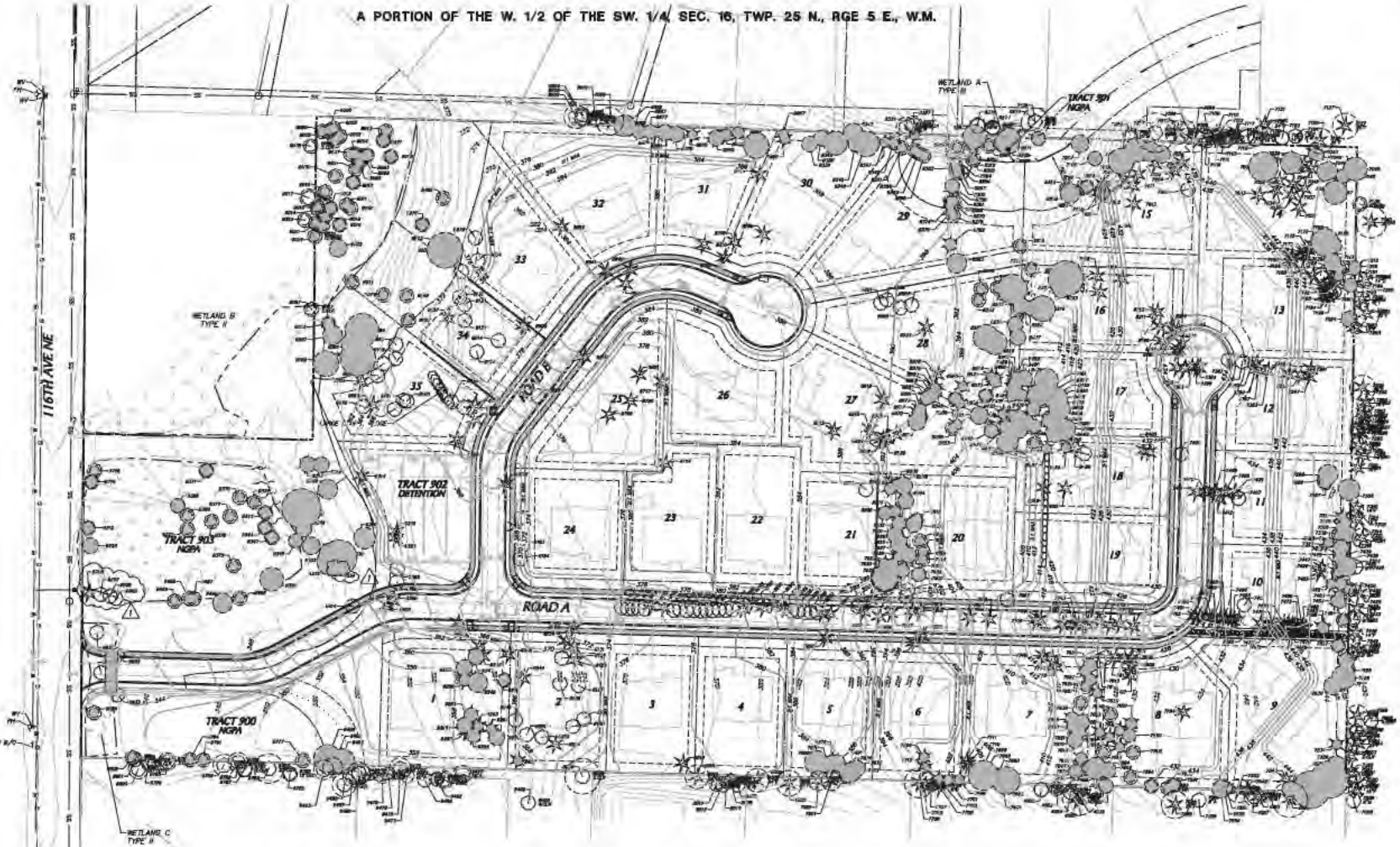
BRIDLESTONE ESTATES

CITY OF KIRKLAND, WASHINGTON

PRELIMINARY

JOB NO. 13-097

SHEET NO. 11 of 14



EXISTING TREE LEGEND

CLR	TREE CLUSTER
A	ALDER
F	DOUGLAS FIR
DEC	DECIDUOUS TREE
M	MAPLE
COT	COTTONWOOD
C	WESTERN RED CEDAR
MA	MADRONA
P	PINE
H	HEMLOCK
FR	FRUIT
AP	APPLE
O	OAK
S	SPRUCE
HOLLY	HOLLY
W	WILLOW

EXISTING OFFSITE CONIFEROUS TREE
EXISTING OFFSITE DECIDUOUS TREE
APPROXIMATE DRIPLINE OF OFFSITE TREE
EXISTING CONIFEROUS TREE TO BE RETAINED
EXISTING DECIDUOUS TREE TO BE RETAINED
APPROXIMATE DRIPLINE OF ON SITE TREE TO BE RETAINED
EXISTING CONIFEROUS TREE TO BE REMOVED
EXISTING DECIDUOUS TREE TO BE REMOVED

TREE DENSITY CALCULATION

SITE AREA (EXCLUDING ROW)	675,941 SF/15.5 ACRES
REQUIRED TREE CREDITS (@30 PER ACRE)	465 TREE CREDITS (@30 PER ACRE: 30 X 15.5)
PROPOSED TREE CREDITS	1,538 TREE CREDITS

N

SCALE: 1" = 60'

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PRELIMINARY TREE RETENTION PLAN

KLN CONSTRUCTION, INC.

BRIDLESTONE ESTATES

CITY OF KIRKLAND, WASHINGTON

PRELIMINARY

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
DENISE LIGON
CERTIFICATE NO. 525
DO NOT USE UNLESS SEALED AND DATED

JOB NO. 13-097

SHEET NO. 12 of 14

DEVELOPMENT STANDARDS

SUB15-00572

DEVELOPMENT STANDARDS LIST
File: Bridlestone Estates SUB15-00572

SUBDIVISION STANDARDS

22.28.030 Lot Size. Unless otherwise approved in the preliminary subdivision or short subdivision approval, all lots within a subdivision must meet the minimum size requirements established for the property in the Kirkland zoning code or other land use regulatory document.

22.28.210 Significant Trees. A Tree Retention Plan was submitted with the subdivision. During the review of the subdivision, all proposed improvements were unknown. Therefore KZC Section 95.30 (6)(a) – Phased Review applies in regards to tree retention.

No trees are to be removed with an approved short plat or subdivision permit. Based on the approved Tree Retention Plan, the applicant shall retain and protect all viable trees throughout the development of each single family lot except for those trees allowed to be removed for the installation of the plat infrastructure improvements with an approved Land Surface Modification permit. Subsequent approval for tree removal is granted for the construction of the house and other associated site improvements with a required Building Permit. The Planning Official is authorized to require site plan alterations to retain High Retention value trees at each stage of the project. In addition to retaining viable trees, new trees may be required to meet the minimum tree density per KZC Section 95.33.

22.32.010 Utility System Improvements. All utility system improvements must be designed and installed in accordance with all standards of the applicable serving utility.

22.32.030 Stormwater Control System. The applicant shall comply with the construction phase and permanent stormwater control requirements of the Municipal Code.

22.32.050 Transmission Line Undergrounding. The applicant shall comply with the utility lines and appurtenances requirements of the Zoning Code.

22.32.060 Utility Easements. Except in unusual circumstances, easements for utilities should be at least ten feet in width.

Prior to Recording:

22.16.030 Final Plat - Lot Corners. The exterior plat boundary, and all interior lot corners shall be set by a registered land surveyor.

22.16.040 Final Plat - Title Report. The applicant shall submit a title company certification which is not more than 30 calendar days old verifying ownership of the subject property on the date that the property owner(s) (as indicated in the report) sign(s) the subdivision documents; containing a legal description of the entire parcel to be subdivided; describing any easements or restrictions affecting the property with a description, purpose and reference by auditor's file number and/or recording number; any encumbrances on the property; and any delinquent taxes or assessments on the property.

22.16.150 Final Plat - Improvements. The owner shall complete or bond all required right-of-way, easement, utility and other similar improvements.

22.20.362 Short Plat - Title Report. The applicant shall submit a title company certification which is not more than 30 calendar days old verifying ownership of the subject property on the date that the property owner(s) (as indicated in the report) sign(s) the short plat documents; containing a legal description of the entire parcel to be subdivided; describing any easements or restrictions affecting the property with a description, purpose and reference by auditor's file number and/or recording number; any encumbrances on the property; and any delinquent taxes or assessments on the property.

22.32.020 Water System. The applicant shall install a system to provide potable water, adequate fire flow and all required fire-fighting infrastructure and appurtenances to each lot created.

22.32.040 Sanitary Sewer System. The developer shall install a sanitary sewer system to serve each lot created.

22.32.080 Performance Bonds. In lieu of installing all required improvements and components as part of a plat or short plat, the applicant may propose to post a bond, or submit evidence that an adequate security device has been

submitted and accepted by the service provider (City of Kirkland and/or Northshore Utility District), for a period of one year to ensure completion of these requirements within one year of plat/short plat approval.

Prior to occupancy:

22.32.020 Water System. The applicant shall install a system to provide potable water, adequate fire flow and all required fire-fighting infrastructure and appurtenances to each lot created.

22.32.040 Sanitary Sewer System. The developer shall install a sanitary sewer system to serve each lot created.

22.32.070 Maintenance Bonds. A two-year maintenance bond may be required for any of the improvements or landscaping installed or maintained under this title.

ZONING CODE STANDARDS

85.25.1 Geotechnical Report Recommendations. The geotechnical recommendations contained in the report by Liu & Associates, Inc. dated May 21, 2015 shall be implemented.

85.25.3 Geotechnical Professional On-Site. A qualified geotechnical professional shall be present on site during land surface modification and foundation installation activities.

90.45 Wetlands and Wetland Buffers. No land surface modification may take place and no improvement may be located in a wetland or within the environmentally sensitive area buffers for a wetland, except as specifically provided in this Section.

90.50 Wetland Buffer Fence. Prior to development, the applicant shall install a six-foot high construction phase fence along the upland boundary of the wetland buffer with silt screen fabric installed per City standard. The fence shall remain upright in the approved location for the duration of development activities. Upon project completion, the applicant shall install between the upland boundary of all wetland buffers and the developed portion of the site, either 1) a permanent 3 to 4 foot tall split rail fence, or 2) permanent planting of equal barrier value.

90.55 Monitoring and Maintenance of Wetland Buffer Modifications: Modification of a wetland buffer will require that the applicant submit a 5-year monitoring and maintenance plan consistent with the criteria found in 95.55 and which is prepared by a qualified professional and reviewed by the City's wetland consultant. The cost of the plan and the City's review shall be borne by the applicant.

90.80 Streams. No land surface modification may take place and no improvements may be located in a stream except as specifically provided in this Section.

90.90 Stream Buffers. No land surface modification may take place and no improvement may be located within the environmentally sensitive buffer for a stream, except as provided in this Section.

90.95 Stream Buffer Fence. Prior to development, the applicant shall install a six-foot high construction phase fence along the upland boundary of the entire stream buffer with silt screen fabric installed per City standard. The fence shall remain upright in the approved location for the duration of development activities. Upon project completion, the applicant shall install between the upland boundary of all stream buffers and the developed portion of the site, either 1) a permanent 3 to 4 foot tall split rail fence, or 2) permanent planting of equal barrier value.

90.100.3 Monitoring and Maintenance of Stream Buffer Modifications: Modification of a stream buffer will require that the applicant submit a 5-year monitoring and maintenance plan consistent with KZC section 95.55. This plan shall be prepared by a qualified professional and reviewed by the City's wetland consultant. The cost of the plan and the City's review shall be borne by the applicant.

95.50 Tree Installation Standards. All supplemental trees to be planted shall conform to the Kirkland Plant List. All installation standards shall conform to Kirkland Zoning Code Section 95.45.

95.52 Prohibited Vegetation. Plants listed as prohibited in the Kirkland Plant List shall not be planted in the City.

100.25 Sign Permits. Separate sign permit(s) are required.

105.18 Pedestrian Walkways. All uses, except single family dwelling units and duplex structures, must provide pedestrian walkways designed to minimize walking distances from the building entrance to the right of way and adjacent transit facilities, pedestrian connections to adjacent properties, between primary entrances of all uses on the subject property, through parking lots and parking garages to building entrances. Easements may be required. In design districts through block pathways or other pedestrian improvements may be required. See also Plates 34 in Chapter 180.

105.19 Public Pedestrian Walkways. The height of solid (blocking visibility) fences along pedestrian pathways that are not directly adjacent a public or private street right-of-way shall be limited to 42 inches unless otherwise approved by the Planning or Public Works Directors. All new building structures shall be setback a minimum of five feet from any pedestrian access right-of-way, tract, or easement that is not directly adjacent a public or private street right-of-way. If in a design district, see section and Plate 34 for through block pathways standards.

105.20 Required Parking. Two parking spaces are required for each detached dwelling unit.

105.47 Required Parking Pad. Except for garages accessed from an alley, garages serving detached dwelling units in low density zones shall provide a minimum 20-foot by 20-foot parking pad between the garage and the access easement, tract, or right-of-way providing access to the garage.

110.60.5 Street Trees. All trees planted in the right-of-way must be approved as to species by the City. All trees must be two inches in diameter at the time of planting as measured using the standards of the American Association of Nurserymen with a canopy that starts at least six feet above finished grade and does not obstruct any adjoining sidewalks or driving lanes.

115.25 Work Hours. It is a violation of this Code to engage in any development activity or to operate any heavy equipment before 7:00 am. or after 8:00 pm Monday through Friday, or before 9:00 am or after 6:00 pm Saturday. No development activity or use of heavy equipment may occur on Sundays or on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas Day. The applicant will be required to comply with these regulations and any violation of this section will result in enforcement action, unless written permission is obtained from the Planning official.

115.40 Fence Location. Fences over 6 feet in height may not be located in a required setback yard. A detached dwelling unit abutting a neighborhood access or collector street may not have a fence over 3.5 feet in height within the required front yard. No fence may be placed within a high waterline setback yard or within any portion of a north or south property line yard, which is coincident with the high waterline setback yard.

A detached dwelling unit may not have a fence over 3.5 feet in height within 3 feet of the property line abutting a principal or minor arterial except where the abutting arterial contains an improved landscape strip between the street and sidewalk. The area between the fence and property line shall be planted with vegetation and maintained by the property owner.

115.42 Floor Area Ratio (F.A.R.) Limits. Floor area for detached dwelling units is limited to a maximum floor area ratio in low density residential zones. See Use Zone charts for the maximum percentages allowed.

115.43 Garage Requirements for Detached Dwelling Units in Low Density Zones. Detached dwelling units served by an open public alley, or an easement or tract serving as an alley, shall enter all garages from that alley. Whenever practicable, garage doors shall not be placed on the front façade of the house. Side-entry garages shall minimize blank walls. For garages with garage doors on the front façade, increased setbacks apply, and the garage width shall not exceed 50% of the total width of the front façade. These regulations do not apply within the disapproval jurisdiction of the Houghton Community Council. Section 115.43 lists other exceptions to these requirements.

115.45 Garbage and Recycling Placement and Screening. For uses other than detached dwelling units, duplexes, moorage facilities, parks, and construction sites, all garbage receptacles and dumpsters must be setback from property lines, located outside landscape buffers, and screened from view from the street, adjacent properties and pedestrian walkways or parks by a solid sight-obscuring enclosure.

115.47 Service Bay Locations. All uses, except single family dwellings and multifamily structures, must locate service bays away from pedestrian areas. If not feasible must screen from view.

115.75.2 Fill Material. All materials used as fill must be non-dissolving and non-decomposing. Fill material must not contain organic or inorganic material that would be detrimental to the water quality, or existing habitat, or create any other significant adverse impacts to the environment.

115.90 Calculating Lot Coverage. The total area of all structures and pavement and any other impervious surface on the subject property is limited to a maximum percentage of total lot area. See the Use Zone charts for maximum lot coverage percentages allowed. Section 115.90 lists exceptions to total lot coverage calculations See Section 115.90 for a more detailed explanation of these exceptions.

115.95 Noise Standards. The City of Kirkland adopts by reference the Maximum Environmental Noise Levels established pursuant to the Noise Control Act of 1974, RCW 70.107. See Chapter 173-60 WAC. Any noise, which injures, endangers the comfort, repose, health or safety of persons, or in any way renders persons insecure in life, or in the use of property is a violation of this Code.

115.115 Required Setback Yards. This section establishes what structures, improvements and activities may be within required setback yards as established for each use in each zone.

115.115.3.g Rockeries and Retaining Walls. Rockeries and retaining walls are limited to a maximum height of four feet in a required yard unless certain modification criteria in this section are met. The combined height of fences and retaining walls within five feet of each other in a required yard is limited to a maximum height of 6 feet, unless certain modification criteria in this section are met.

115.115.3.n Covered Entry Porches. In residential zones, covered entry porches on dwelling units may be located within 13 feet of the front property line if certain criteria in this section are met. This incentive is not effective within the disapproval jurisdiction of the Houghton Community Council.

115.115.3.o Garage Setbacks. In low density residential zones, garages meeting certain criteria in this section can be placed closer to the rear property line than is normally allowed in those zones.

115.115.3.p HVAC and Similar Equipment: These may be placed no closer than five feet of a side or rear property line,

and shall not be located within a required front yard; provided, that HVAC equipment may be located in a storage shed approved pursuant to subsection (3)(m) of this section or a garage approved pursuant to subsection (3)(o)(2) of this section. All HVAC equipment shall be baffled, shielded, enclosed, or placed on the property in a manner that will ensure compliance with the noise provisions of KZC 115.95.

115.115.5.a **Driveway Width and Setbacks.** For a detached dwelling unit, a driveway and/or parking area shall not exceed 20 feet in width in any required front yard, and shall be separated from other hard surfaced areas located in the front yard by a 5-foot wide landscape strip. Driveways shall not be closer than 5 feet to any side property line unless certain standards are met.

115.135 **Sight Distance at Intersection.** Areas around all intersections, including the entrance of driveways onto streets, must be kept clear of sight obstruction as described in this section.

152.22.2 **Public Notice Signs.** Within seven (7) calendar days after the end of the 21-day period following the City's final decision on the permit, the applicant shall remove all public notice signs.

Prior to recording:

110.60.6 **Mailboxes.** Mailboxes shall be installed in the development in a location approved by the Postal Service and the Planning Official. The applicant shall, to the maximum extent possible, group mailboxes for units or uses in the development.

Prior to issuance of a grading or building permit:

85.25.1 **Geotechnical Report Recommendations.** A written acknowledgment must be added to the face of the plans signed by the architect, engineer, and/or designer that he/she has reviewed the geotechnical recommendations and incorporated these recommendations into the plans.

85.45 **Liability.** The applicant shall enter into an agreement with the City, which runs with the property, in a form acceptable to the City Attorney, indemnifying the City for any damage resulting from development activity on the subject property which is related to the physical condition of the property (see Attachment 15).

90.50 **Wetland Buffer Fence.** Prior to development, the applicant shall install a six-foot high construction phase fence along the upland boundary of the wetland buffer with silt screen fabric installed per City standard. The fence shall remain upright in the approved location for the duration of development activities. Upon project completion, the applicant shall install between the upland boundary of all wetland buffers and the developed portion of the site, either 1) a permanent 3 to 4 foot tall split rail fence, or 2) permanent planting of equal barrier value.

90.150 **Natural Greenbelt Protective Easement.** The applicant shall submit for recording a natural greenbelt protective easement, in a form acceptable to the City Attorney, for recording with King County (see Attachment 14).

90.155 **Liability.** The applicant shall enter into an agreement with the City which runs with the property, in a form acceptable to the City Attorney, indemnifying the City for any damage resulting from development activity on the subject property which is related to the physical condition of the stream, minor lake, or wetland (see Attachment 13/13a).

95.30(4) **Tree Protection Techniques.** A description and location of tree protection measures during construction for trees to be retained must be shown on demolition and grading plans.

95.34 **Tree Protection.** Prior to development activity or initiating tree removal on the site, vegetated areas and individual trees to be preserved shall be protected from potentially damaging activities. Protection measures for trees to be retained shall include (1) placing no construction material or equipment within the protected area of any tree to be retained; (2) providing a visible temporary protective chain link fence at least 6 feet in height around the protected area of retained trees or groups of trees until the Planning Official authorizes their removal; (3) installing visible signs spaced no further apart than 15 feet along the protective fence stating "Tree Protection Area, Entrance Prohibited" with the City code enforcement phone number; (4) prohibiting excavation or compaction of earth or other damaging activities within the barriers unless approved by the Planning Official and supervised by a qualified professional; and (5) ensuring that approved landscaping in a protected zone shall be done with light machinery or by hand.

Prior to occupancy:

85.25.3 **Geotechnical Professional On-Site.** The geotechnical engineer shall submit a final report certifying substantial compliance with the geotechnical recommendations and geotechnical related permit requirements.

90.145 **Bonds.** The City may require a bond and/or a perpetual landscape maintenance agreement to ensure compliance with any aspect of the Drainage Basins chapter or any decision or determination made under this chapter.

95.51.2.a **Required Landscaping.** All required landscaping shall be maintained throughout the life of the development. The applicant shall submit an agreement to the city to be recorded with King County which will perpetually maintain required landscaping. Prior to issuance of a certificate of occupancy, the proponent shall provide a final as-built landscape plan and an agreement to maintain and replace all landscaping that is required by the City

95.51.2.b Tree Maintenance. For detached dwelling units, the applicant shall submit a 5-year tree maintenance agreement to the Planning and Building Department to maintain all pre-existing trees designated for preservation and any supplemental trees required to be planted.

95.51.3 Maintenance of Preserved Grove. The applicant shall provide a legal instrument acceptable to the City ensuring the preservation in perpetuity of approved groves of trees to be retained.

110.60.6 Mailboxes. Mailboxes shall be installed in the development in a location approved by the Postal Service and the Planning Official. The applicant shall, to the maximum extent possible, group mailboxes for units or uses in the development.

110.75 Bonds. The City may require or permit a bond to ensure compliance with any of the requirements of the Required Public Improvements chapter.

BUILDING DEPARTMENT

Contact: Tom Jensen – tjensen@kirklandwa.gov

1. Prior to issuance of Building, Demolition or Landsurface Modification permit applicant must submit a proposed rat baiting program for review and approval. Kirkland Municipal Ordinance 9.04.040
2. A demolition permit is required for removal of existing structures prior to recording.
3. Plumbing meter and service line shall be sized in accordance with the current UPC. We are currently using the 2012 edition.
4. Building permits must comply with the International Building, Residential and Mechanical Codes and the Uniform Plumbing Code as adopted and amended by the State of Washington and the City of Kirkland. Kirkland currently has adopted the 2012 editions.
5. Structures must comply with International Energy Conservation Code as adopted and amended by the State of Washington. We are currently using the 2012 edition.
6. Kirkland reviews, issues and inspects all electrical permits in the city. Kirkland currently uses the 2014 Washington Cities Electrical Code chapters 1 and 3 as published by WABO.
7. Structures must be designed for seismic design category D, wind speed of 85 miles per hour and exposure B.

FIRE DEPARTMENT COMMENTS

Contact: Grace Steuart at 425-587-3660; or gsteuart@kirklandwa.gov

ACCESS:

Access as shown is acceptable.

FIRE FLOW:

Required fire flow for single family residential areas is 1,000 gpm. The available fire flow on 116th Avenue NE is approximately 1,200 gpm.

WATER SYSTEM

All hydrants which are considered coverage for the project, whether new or existing, shall be equipped with 5" Storz fittings.

SPRINKLER THRESHOLD

Per Kirkland Municipal Code, all new buildings which are 5,000 gross square feet or larger require fire sprinklers. Included are single family homes, duplexes, and zero lot line townhouses where the aggregate area of all connected townhouses is greater than 5,000 square feet; garages, porches, covered decks, etc, are included in the gross square footage. (This comment is included in the short plat conditions for informational purposes only.)

PUBLIC WORKS DEPARTMENT

Public Works Staff Contacts

Land Use and Pre-Submittal Process:
Rob Jammerman, Development Engineering Manager
Phone: 425-587-3845 Fax: 425-587-3807
E-mail: rjammer@kirklandwa.gov

Building and Land Surface Modification (Grading) Permit Process:

John Burkhalter, Development Engineer Supervisor
Phone: 425-587-3846 Fax: 425-587-3807
E-mail: jburkhalter@kirklandwa.gov

GENERAL CONDITIONS:

1. All public improvements associated with this project including street and utility improvements, must meet the City of Kirkland Public Works Pre-Approved Plans and Policies Manual. A Public Works Pre-Approved Plans and Policies manual can be purchased from the Public Works Department, or it may be retrieved from the Public Works Department's page at the City of Kirkland's web site at www.kirklandwa.gov.

2. This project will be subject to Public Works Permit and Connection Fees. It is the applicant's responsibility to contact the Public Works Department by phone or in person to determine the fees. The fees can also be review the City of Kirkland web site at www.kirklandwa.gov The applicant should anticipate the following fees:

    - Water, Sewer, and Surface Water Connection Fees (paid with the issuance of a Building Permit)
    - Side Sewer Inspection Fee (paid with the issuance of a Building Permit)
    - Septic Tank Abandonment Inspection Fee
    - Water Meter Fee (paid with the issuance of a Building Permit)
    - Right-of-way Fee
    - Review and Inspection Fee (for utilities and street improvements).
    - Building Permits associated with this proposed project will be subject to the traffic, park, and school impact fees per Chapter 27 of the Kirkland Municipal Code. The impact fees shall be paid prior to issuance of the Building Permit(s). Any existing buildings within this project which are demolished will receive a Traffic Impact Fee credit, Park Impact Fee Credit and School Impact Fee Credit. This credit will be applied to the first Building Permits that are applied for within the project. The credit amount for each demolished building will be equal to the most currently adopted Fee schedule.

3. All street and utility improvements shall be permitted by obtaining a Land Surface Modification (LSM) Permit.

4. Submittal of Building Permits within a subdivision prior to recording:

    - Submittal of a Building Permit with an existing parcel number prior to subdivision recording: A Building Permit can be submitted prior to recording of the subdivision for each existing legal building lot in the subject property, however in order for it to be deemed a complete application, all of the utility and street improvements for the new home must be submitted with the Building Permit application. If the utility and street improvements are to be reviewed and constructed through a Land Surface Modification permit process, then Building Permit cannot be applied for because it will be deemed incomplete until the Land Surface Modification Permit is applied for.

    - Submittal of a Building Permit within a standard subdivision: The Building Permits for the new houses can be applied for after the subdivision is recorded and the Land Surface Modification permit has been applied for.

- Review of Expedited or Green Building Permits: A new single family home Building Permit within a subdivision can only be review on an expedited or green building fast track if the associated Land Surface Modification Permit has been reviewed and approved by the Public Works Department.

5. Subdivision Performance and Maintenance Securities:

   - The subdivision can be recorded in advance of installing all the required street and utility improvements by posting a performance security equal to 130% of the value of work. This security amount will be determined by using the City of Kirkland's Improvement Evaluation Packet. Contact the Development Engineer assigned to this project to assist with this process.
   - If the Developer will be installing the improvements prior to recording of the subdivision, there is a standard right of way restoration security ranging from $10,000.00 to 30,000.00 (value determined based on amount of right-of-way disruption). This security will be held until the project has been completed.
   - Once the subdivision has been completed there will be a condition of the permit to establish a two year Maintenance security.

6. The project has applied for and received Transportation Concurrency Test Notice. Case No. TRAN16-00165. See attached Transportation Memo from Thang Nguyen, Transportation Engineer.

7. All civil engineering plans which are submitted in conjunction with a building, grading, or right-of-way permit must conform to the Public Works Policy titled ENGINEERING PLAN REQUIREMENTS. This policy is contained in the Public Works Pre-Approved Plans and Policies manual.

8. All street improvements and underground utility improvements (storm, sewer, and water) must be designed by a Washington State Licensed Engineer; all drawings shall bear the engineers stamp.

9. All plans submitted in conjunction with a building, grading or right-of-way permit must have elevations which are based on the King County datum only (NAVD 88).

10. All subdivision recording mylar's shall include the following note:

    Utility Maintenance: Each property owner shall be responsible for maintenance of the sanitary sewer or storm water stub from the point of use on their own property to the point of connection in the City sanitary sewer main or storm water main. Any portion of a sanitary sewer or surface water stub, which jointly serves more than one property, shall be jointly maintained and repaired by the property owners sharing such stub. The joint use and maintenance shall "run with the land" and will be binding on all property owners within this subdivision, including their heirs, successors and assigns.

    Public Right-of-way Sidewalk and Vegetation Maintenance: Each property owner shall be responsible for keeping the sidewalk abutting the subject property clean and litter free. The property owner shall also be responsible for the maintenance of the vegetation within the abutting landscape strip. The maintenance shall "run with the land" and will be binding on all property owners within this subdivision, including their heirs, successors and assigns.

    Maintenance of On-site Private Stormwater Facilities: Each Lot within the Subdivision has a stormwater facility (infiltration trench, dry wells, dispersion systems, rain garden, and permeable pavement) which is designed to aid storm water flow control for the development. The stormwater facility within the property shall be owned, operated and maintained by the Owner. The City of Kirkland shall have the right to ingress and egress the Property for inspection of and to reasonable monitoring of the performance, operational flows, or defects of the stormwater/flow control facility.

    If the City of Kirkland determines related maintenance or repair work of the stormwater facility is required, the City of Kirkland shall give notice to the Owner of the specific maintenance and/or repair work required. If the above required maintenance or repair is not completed within the time set by the City of Kirkland, the City of Kirkland may perform the required maintenance or repair, or contract with a private company capable of performing the stormwater facility maintenance or repair and the Owner will be required to reimburse the City for any such work performed.

The Owner is required to obtain written approval from the City of Kirkland prior to replacing, altering, modifying or maintaining the storm water facility.

If the project contains LID storm improvements that will be installed as a condition of the new home Building Permit, then include this condition on the Short Plat recording documents:

- Installation of Low Impact Development (LID) storm drainage improvements with Building Permits: All LID storm drainage features depicted on Sheet ____ of ____ of issued permit LSM1X-0XXXX shall be installed in conjunction with the construction of each new home on lots X to X. The LID improvements include, but are not limited to the rain gardens and the pervious driveways. The Building Permit for the new signal family home on lots X to X will not receive a final inspection until said LID improvements are installed. The pervious access road/Tract serving lots X and X shall be constructed or secured by a performance bond prior to recording of the short plat

SANITARY SEWER CONDITIONS:

1. The applicant shall extend the existing public sewer system to provide sanitary sewer service for each lot within the proposed project. Extend an 8" sewer main along the public streets and provide a 6” side sewer stub to each lot.
2. The existing septic system shall be abandoned per City standards.
3. Because this property flows through the Bellevue sewer system. A special sewer wheeling charge fee will be assessed against each lot at $0.02 psf of lot area. This charge will be collected at issuance of each building permit.

WATER SYSTEM CONDITIONS:

1. The applicant shall extend the existing public water system to provide water service for each lot. Extend an 8-inch water main along the new streets and provide hydrants per the Fire Department direction.
2. Loop an 8-inch main extension between the end of Road B and Road A (from cul-de-sacs between lots 28/29 and 15/16 unless otherwise agreed to by Public Works). The water main shall be located in a 15 ft. public utility easement
3. Provide a separate 1" minimum water service from the water main to the meter for each lot; City of Kirkland will set the water meter. The water size is determined when the Building Permit is submitted and is sized per the Uniform Plumbing Code. A ¾” meter is the typical size for new single-family home.
4. All existing water services and on-site wells shall be abandoned.

SURFACE WATER CONDITIONS:

1. Provide temporary and permanent storm water control per the 2009 King County Surface Water Design Manual and the Kirkland Addendum (Policy D-10).
   - Full Drainage Review

     A full drainage review is required for any proposed project, new or redevelopment, that will:

     - ✓ Adds 5,000ft^2 or more of new impervious surface area or 10,000ft^2 or more of new plus replaced impervious surface area,
     - ✓ Propose 7,000ft^2 or more of land disturbing activity, or,
     - ✓ Be a redevelopment project on a single or multiple parcel site in which the total of new plus replaced impervious surface area is 5,000ft^2 or more and whose valuation of proposed improvements (including interior improvements but excluding required mitigation and frontage improvements) exceeds 50% of the assessed value of the existing site improvements.
2. A preliminary drainage report (Technical Information Report -TIR) has been submitted with the subdivision application. The report has been reviewed and found to be complete. Two items that were noted and will need to be addressed during review of the Land Surface Modification Permit were: 1) there was an assumed

maximum lot coverage of 35%. If this is to be used, lot coverage covenants will need to be recorded with the subdivision; and 2) the TIR did not include the new impervious area that will be added along 116th Ave. NE in conjunction with street improvement installation. Full review of the TIR will occur with the submittal of the Land Surface Modification Permit.

3. Evaluate the feasibility and applicability of dispersion, infiltration, and other stormwater low impact development facilities on-site (per section 5.2 in the 2009 King County Surface Water Design Manual). If feasible, stormwater low impact development facilities are required. See PW Pre-Approved Plan Policy L-1 or L-2 (depending on drainage review) for more information on this requirement.

4. Because this project site is one acre or greater, the following conditions apply:

   - Amended soil requirements (per Ecology BMP T5.13) must be used in all landscaped areas.
   - If the project meets minimum criteria for water quality treatment (5,000ft2 pollution generating impervious surface area), the enhanced level of treatment is required if the project is multi-family residential, commercial, or industrial. Enhanced treatment targets the removal of metals such as copper and zinc.
   - The applicant is responsible to apply for a Construction Stormwater General Permit from Washington State Department of Ecology. Provide the City with a copy of the Notice of Intent for the permit. Permit Information can be found at the following website: http://www.ecy.wa.gov/programs/wq/stormwater/construction/
     - Among other requirements, this permit requires the applicant to prepare a Storm Water Pollution Prevention Plan (SWPPP) and identify a Certified Erosion and Sediment Control Lead (CESCL) prior to the start of construction. The CESCL shall attend the City of Kirkland PW Dept. pre-construction meeting with a completed SWPPP.
   - Turbidity monitoring by the developer/contractor is required if a project contains a lake, stream, or wetland.
   - A Stormwater Pollution Prevention and Spill (SWPPS) Plan must be kept on site during all phases of construction and shall address construction-related pollution generating activities. Follow the guidelines in the 2009 King County Surface Water Design Manual for plan preparation.

5. This project is creating or replacing more than 5000 square feet of new impervious area that will be used by vehicles (PGIS - pollution generating impervious surface). Provide storm water quality treatment per the 2009 King County Surface Water Design Manual.

6. Provide a level one off-site analysis (based on the King County Surface Water Design Manual, core requirement #2).

7. If any work is occurring within an existing ditch, the developer has been given notice that the Army Corps of Engineers (COE) has asserted jurisdiction over upland ditches draining to streams. Either an existing Nationwide COE permit or an Individual COE permit may be necessary for work within ditches, depending on the project activities.

   Applicants should obtain the applicable COE permit; information about COE permits can be found at: U.S. Army Corps of Engineers, Seattle District Regulatory Branch

   Specific questions can be directed to: Seattle District, Corps of Engineers, Regulatory Branch, CENWS-OD-RG, Post Office Box 3755, Seattle, WA 98124-3755, Phone: (206) 764-3495

8. Provide an erosion control report and plan with Building or Land Surface Modification Permit application. The plan shall be in accordance with the 2009 King County Surface Water Design Manual.

9. Construction drainage control shall be maintained by the developer and will be subject to periodic inspections. During the period from May 1 and September 30, all denuded soils must be covered within 7 days; between October 1 and April 30, all denuded soils must be covered within 12 hours. Additional erosion control measures may be required based on site and weather conditions. Exposed soils shall be stabilized at the end of the workday prior to a weekend, holiday, or predicted rain event.

10. Provide collection and conveyance of right-of-way storm drainage

11. Provide a separate storm drainage connection for each lot. All roof and driveway drainage must be tight-lined to the storm drainage system or utilize low impact development techniques. The tight line connections shall be installed with the individual new houses.

12. Other issues noted related to the surface water system:

- There are offsite flows directed onto the project from the North. Adjacent public storm systems flow into Yarrow Creek onto this project area. The creek channel and existing flows must be allowed to continue across this project.
- Detention facilities must meet Level II flow control, and must be located outside of stream and wetland buffers and building setbacks.
- It appears they will need to widen the road and culvert over Yarrow Creek for access to this subdivision. This work will require an HPA from WDFW.

STREET AND PEDESTRIAN IMPROVEMENT CONDITIONS:

1. The subject property abuts 116th Ave. NE, a Collector type street. The project will also be installing new public streets for access purposes. The new streets will be Neighborhood Access type streets. Zoning Code sections 110.10 and 110.25 require the applicant to make street improvements in rights-of-way abutting the subject property. Section 110.30-110.50 establishes that this street must be improved with the following:

116th Ave. NE - Per Chapter 110.70.3.b and 110.70.3.c of the KZC, the Public Works Department is recommending a modification to the required street improvements along said street. The improvements required will be similar to the improvements installed by the City of Bellevue along the east side of 116th Ave. NE south of this project. Also the improvements are being modified to minimize the impacts to the wetland buffer directly adjacent the east side of the 116th Ave. NE ROW. The street improvements shall include the following:

A. Widen the street to 16 ft. from centerline to face of curb to provide for an 11 ft. northbound lane and a 5 ft. wide northbound bike lane.

B. Install a storm drainage collection and conveyance and an 8-10 ft. soft path with a surface material suitable for pedestrians and equestrians (these improvements are similar to the 116th Ave. NE improvements installed to the south in the City of Bellevue)

Streets within the project:

- The plans submitted with the application show that road A and B have been designed per the R-24 standard in Kirkland Zoning Code Chapter 110. The improvements for an R-24 street include:
  - 45 ft. wide right-of-way dedication
  - Vertical curb and gutter
  - Storm drainage
  - 4.5 ft. wide landscape strips with street trees between the curb and the sidewalks.
  - 5 ft. wide sidewalks.

  Note: Road A crosses a stream and wetland near the west side of the site. To minimize impacts on the stream and wetland, a 5 ft. wide sidewalk with no landscape strip will only be required on one side of the street through this section of road A (currently depicted on the north side). This being recommended as a modification per KZC 110.70.3.b because installation of the standard improvements would cause significant grading impacts on the wetland and can be categorized as an unusual physical condition that preclude the construction of the improvements.

2. A 10 ft. wide minimum pedestrian/equestrian easement with an 8 ft. wide minimum pedestrian/equestrian pathway is required to the east property line between lots 9 and 10. The pathway surface shall meet equestrian standards and will be determined during final Grading Permit review.

3. When three or more utility trench crossings occur within 150 lineal ft. of street length or where utility trenches parallel the street centerline, the street shall be overlaid with new asphalt or the existing asphalt shall be removed and replaced.

   - Existing streets with 4-inches or more of existing asphalt shall receive a 2-inch (minimum thickness) asphalt overlay. Grinding of the existing asphalt to blend in the overlay will be required along all match lines.
   - Existing streets with 3-inches or less of existing asphalt shall have the existing asphalt removed and replaced with an asphalt thickness equal or greater than the existing asphalt provided however that no asphalt shall be less than 2-inches thick and the subgrade shall be compacted to 95% density.

4. The driveway for each lot shall be long enough so that parked cars do not extend into the access easement or right-of-way (20 ft. min.)

5. All street and driveway intersections shall not have any visual obstructions within the sight distance triangle. See Public Works Pre-approved Policy R.13 for the sight distance criteria and specifications.

6. Prior to the final of the building or grading permit, pay for the installation of stop and street signs at the new intersections.

7. Install "NO PARKING ANYTIME" signs along both sides of the main entrance up to where road A and road B intersect.

8. Install new monuments at all new street intersections and as directed by the surveyor.

9. It shall be the responsibility of the applicant to relocate any above-ground or below-ground utilities which conflict with the project associated street or utility improvements.

10. Underground all new and <u>existing</u> on-site utility lines and overhead transmission lines.

11. Zoning Code Section 110.60.9 establishes the requirement that existing utility and transmission (power, telephone, etc.) lines on-site and in rights-of-way adjacent to the site must be underground. The Public Works Director may determine if undergrounding transmission lines in the adjacent right-of-way is not feasible and defer the undergrounding by signing an agreement to participate in an undergrounding project, if one is ever proposed. In this case, the Public Works Director has determined that undergrounding of existing overhead utility on 116th Ave. NE is not feasible at this time and the undergrounding of off-site/frontage transmission lines should be deferred with a Local Improvement District (LID) No Protest Agreement. The final recorded subdivision mylar shall include the following note:

    Local Improvement District (LID) Waiver Agreement. Chapter 110.60.7.b of the Kirkland Zoning Code requires all overhead utility lines along the frontage of the subject property to be converted to underground unless the Public Works Director determines that it is infeasible to do so at the time of the subdivision recording. If it is determined to be infeasible, then the property owner shall consent to the formation of a Local Improvement District, hereafter formed by the City or other property owners. During review of this subdivision it was determined that it was infeasible to convert the overhead utility lines to underground along the frontage of this subdivision on 116th Ave. NE. Therefore, in consideration of deferring the requirement to underground the overhead utility lines at the time of the subdivision recording, the property owner and all future property owners of lots within this subdivision hereby consent to the formation of a Local Improvement District hereafter formed by the City or other property owners.

12. New LED street lights will be required per Puget Power design and Public Works approval. Contact the INTO Light Division at PSE for a lighting analysis. The lighting design must be submitted prior to issuance of a grading or building permit.

LIU & ASSOCIATES, INC.

Geotechnical Engineering | Engineering Geology | Earth Science

May 21, 2015

Mr. Lucas Kragt
KLN Construction, Inc.
19000 – 33rd Avenue West, Suite 200
Lynnwood, WA 98036

Dear Mr. Kragt:

Subject: Geotechnical Investigation
Bridlestone Estates
46xx – 116th Avenue NE
Kirkland, Washington
L&A Job No. 14-070

INTRODUCTION

We have completed a geotechnical investigation for the proposed subject development project, located at the above address in Kirkland, Washington. We understand that the proposed development is to plat the project site into 35 single-family residential building lots with supporting infrastructure. We also understand that onsite stormwater disposal by infiltration is being considered for the subject project.

The purpose of this investigation is to explore and characterize subsurface conditions of the site, evaluate feasibility of onsite stormwater disposal by infiltration, and provide geotechnical recommendations on onsite stormwater disposal, grading, site stabilization, surface and ground water drainage control, erosion mitigation, soil parameters for

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retaining wall design, and foundation support to buildings for the proposed development. Presented in this report are our findings, conclusion, and recommendations.

SITE CONDITIONS

Surface Condition

The general location of the project site is shown on Plate 1 – Vicinity Map. The site is situated on a gentle to moderately-steep, westerly-declining hillside. As shown on Plate 2 – Site and Exploration Location Plan, the site is clever-shaped land elongated in the east-west direction with a short handle at its southwest corner. It is bounded by 116th Avenue NE to its west, and adjoined by Bridle Trails State Park to its east and residential development to its north and south.

The terrain within the project site generally slopes down gently to moderately-steeply from the east down towards the west. The site has been graded into level benches on which barns, fenced corrals, and buildings and sheds are located, between moderately steep slopes, gravel roads and trails. The slopes in between the benches are mostly dotted with tall mature trees and covered by lawn grass.

Geologic Setting

The Geologic Map of King County, Washington, by Derek B. Booth, Kathy A. Troost and Aaron P. Wisher (2007) was referenced for the geologic and soil conditions at the property. According to this publication, the surficial soil units at and in the vicinity of the

site are mapped as Vashon Till (Q_{vt}) deposits underlain by Advance Outwash (Q_{va}) deposits.

The geology of the Puget Sound Lowland has been modified by the advance and retreat of several glaciers in the past one million years and the subsequent deposits and erosion. The last glacier advanced to the Puget Sound Lowland is referred to as the Vashon Stade of the Fraser Glaciation, which occurred during the later stages of the Pleistocene Epoch and retreated from the region some 12,500 years ago.

The deposits of the Vashon till soil unit (Q_{vt}) were plowed directly under glacial ice during the most recent glacial period as the glacier advanced over an eroded, irregular surface of older formations and sediments. This soil unit is composed of a mixture of unsorted clay, silt, sand, gravel, and scattered cobbles and boulders. The Vashon till soil over the top two to three feet is normally weathered to a medium-dense state, and is moderately permeable and compressible. The underlying fresh till soil, commonly referred to as "hard pan", is very dense and weakly cemented. The fresh till soil possesses a compressive strength comparable to that of low-grade concrete and can remain stable on steep natural slopes or man-make cuts for a long period. The fresh till deposits are practically impervious to stormwater infiltration and can provide excellent foundation support with little or no settlement.

The advance outwash soil unit (Q_{va}), normally underlying the Vashon till soil unit, is composed of stratified sand and gravel with very minor amount of silt and clay, deposited

by the meltwater of advancing glacial ice of the last glacier. Due to their generally granular composition, the advance outwash deposits are of moderately high permeability and drains fairly well. The advance outwash deposits had been glacially overridden and are generally dense to very-dense in their natural, undisturbed state, except the soils in the top 2 to 3 feet exposed on slopes which are normally weathered to a loose to medium-dense state. The underlying fresh advance outwash deposits can stand in steep cuts or natural slopes for extended period when undisturbed and properly drained. Where exposed on slopes, devoid of vegetation cover, and subject to storm runoff or groundwater seepage, the advance outwash deposits can be gradually eroded and may slough and redeposit to a flatter inclination. The fresh advance outwash deposits are also quite stable and capable of providing very good foundation support with little settlement.

Soil Condition

Subsurface conditions of the project site were explored with three test borings. A geotechnical engineer from our office was present during subsurface exploration, examined the soil and geologic conditions encountered, and completed logs of test borings. The locations of the test borings are shown on Plate 2 – Site and Exploration Location Plan. The test borings were drilled on July 15, 2014, with a tract-mounted drill rig, owned and operated by Davies Drilling of Seattle, Washington.

Soil samples obtained from each soil layer in the test borings were visually classified in general accordance with United Soil Classification System, a copy of which is presented

on Plate 3. Detailed descriptions of soils encountered during site exploration are presented in test boring logs on Plates 4 through 6.

Standard Penetration Tests were conducted, in accordance with ASTM D-1586, in the bore holes using a standard split-spoon sampler of 2-inch outside diameter, driven with a 140-pound hammer that was raised and released for a 30-inch free fall. The number of blows required to advance the sampler a given distance is an indication of the density for granular soils or the consistency of cohesive soils. The sampler was advanced 18 inches and the total number of blows for the last 12 inches was recorded on the boring logs as N-values of the Standard Penetration Tests.

All three test borings encountered an advance outwash soil deposit with the top of this deposit at about 4.0 to 9.5 feet below existing ground surface. The advance outwash deposits are composed of brown to brown-gray to gray, medium-dense to dense, fine to medium sand. The density of this advance outwash soil unit generally increases with depth. Overlying the advance outwash soil unit is a layer or layers of weathered soil of loose to medium-dense, silty fine sand, with peat bedding and wood chips locally. A Lawton Clay soil unit of gray clayey silt was encountered at 15.5 feet, underlying the advance outwash deposit, in Test Boring B-2.

Groundwater Condition

Groundwater table was encountered in all three test borings at depths from 14.5 to 16.5 feet. This groundwater is perched on a Lawton clay soil unit of extremely low

permeability underlying the advance outwash soil unit. The level of the groundwater table would fluctuate seasonally, depending on precipitation, surface runoff, ground vegetation cover, site utilization, and other factors. A groundwater monitoring well was installed in each test bore hole with a PVC stand pipe fit with a 5-foot piezometer tip inserted in drilled holes. The annular space in the bore holes was then packed with commercial silica sand and sealed with bentonite pallets. The wells were then capped with a well monument secured with a padlock. The monitoring wells will be used to determined winter high groundwater table, and the groundwater table data will be used in consideration of design of infiltration trenches or galleries.

GEOLOGIC HAZARDS AND MITIGATION

Erosion Hazard

The surficial topsoil and weathered soil are of low resistance against erosion, while the underlying dense advance outwash deposit is of moderately high resistance against erosion. The weaker surficial soils on the steeper areas of the site can be gradually eroded if they are devoid of vegetation cover and saturated. The erosion hazard may be mitigated by maintaining and protecting vegetation cover outside of construction areas. Exposed unpaved ground from construction activities should be covered with plastic tarps during construction and be re-seeded and re-vegetated as soon as possible. Concentrated stormwater should not be discharged uncontrolled onto the ground within the site. Stormwater over impervious surfaces, such as roofs and paved roadways, driveways and parking areas, should be captured by underground drain line systems connected to roof downspouts and catch basins installed in paved areas. Water collected into these drain

line systems should be tightlined to discharge into a storm sewer or suitable stormwater disposal facilities, such as infiltration trenches.

Landslide Hazard

The project site is generally graded into nearly level benches and gentle slopes, disrupted by occasional steep slopes. The site is underlain by a dense advance outwash deposit with its surface at about 4 to 7 feet deep in the steeper east area and about 4 to 10 feet deep in the low-lying gently sloped west area of the site. The advance outwash deposit is of high shear strength and is highly resistant against slope failures. Therefore, the potential for deep-seated slides to occur within the site should be minimal if the recommendations in this report are fully implemented and observed.

Seismic Hazard

The Puget Sound region is in an active seismic zone. The project site is underlain at shallow depth by dense advance outwash deposits of high shear strength. Therefore, the potential for seismic hazards, such as landslides and lateral soil spreading, to occur on the site should be minimal if the erosion mitigation, drainage control, and site stabilization measures recommended in this report are fully implemented.

Seismic hazard can also be in the form of liquefaction which can cause soils to liquefy due to ground shaking from strong earthquakes. The type of soils most susceptible to liquefaction during a strong seismic event is a saturated, loose, fine sand to silty fine sand deposit coupled with high groundwater table. Such a loose deposit, when subjected to strong ground shaking, can be densified and decrease in volume. If water in the deposit is

unable to drain quickly, pore water pressure in the deposit would increase. When the pore water pressure continues to build up by prolonged ground shaking, a "quick" condition will be reached when the pore water pressure equals the effective overburden soil pressure at some depths. Under this condition, the sand deposit will turn into a liquid state and lose its load bearing capacity and cause structures it supports to settle, tilt, or topple over.

Liquefaction Hazard Mitigation

Liquefaction potential can be mitigated by the following measures:

a) Over-Excavation and Backfilling

The loose to very-loose, fine sand to silty fine sand deposit down to about 13 feet which are prone to liquefaction may be over-excavated and backfill with free-draining pit-run granular soil or crushed rock compacted in lifts to a dense state. Conventional footing foundations may then be poured on the backfill to support proposed residences.

b) Shallow Excavation lined with Non-woven Filter Fabric

The building footprint excavation may be excavated to 3 to 4 feet deep and to 3 feet laterally beyond building limits of the residences. The soils at bottom of excavation should be compacted to a non-yielding state with a vibratory mechanical compactor. The bottom and side walls of excavation should then be lined with a layer of non-woven filter fabric, such as Mirafi 140 NS. The excavation is then backfilled with 2-to-4-inch rock spalls at least 2.0 feet thick,

topped with a 6-inch layer of 2-inch crushed rock. The rock spall fill and the crushed rock base course should be placed in lifts, with each lift compacted to a non-yielding state with a vibratory mechanical compactor. Conventional footing foundations may then be constructed on the crushed rock base. The purpose of the non-woven filter fabric liner is to allow potential upwelling groundwater during strong earthquakes to flow into the voids in the rock spall fill while keep the soil underneath in place, and thus providing effective mitigation to liquefaction hazard.

c) Improvement Surficial Loose Soils

The permeability and density of surficial loose to very-loose fine sand to silty fine sand deposits may be improved to increase their resistance against liquefaction. Density increase may be achieved by vibro-floatation method. This method uses vibrofloat equipment to create voids in the loose sand or silty sand soil by vibration and fill the voids with densified sand. Permeability of loose sand and silty sand may be improved by stone columns. This method requires drilling holes in the ground through the loose sand into underlying dense or hard soil. The holes are then filled free-draining gravel or crushed rock into which groundwater can flow freely as pore water pressure in the loose sand deposits increases during strong earthquakes. Conventional footing foundations may then constructed on top of improved soils.

d) Deep Foundations

Deep foundations, such as augercast piles or driven piles, may be installed to penetrate through the surficial loose to very-loose sandy soils and seated into the

underlying dense advance outwash sand deposit to support the residential buildings. Stability of buildings thus supported will not be compromised even if liquefaction occurs in the surficial loose to very-loose sandy soils.

The proposed residential buildings should be designed for seismic forces induced by strong earthquakes. Based on the soil conditions encountered by the test pits, it is our opinion that Seismic Use Group I and Site Class C should be used in the seismic design of the proposed residences in accordance with the 2012 International Building Code (IBC).

DISCUSSION AND RECOMMENDATIONS

GENERAL

Based on the soil conditions encountered by test borings drilled on the site, it is our opinion that the project site is suitable for the proposed development from the geotechnical engineering viewpoint, provided that the recommendations in this report are fully implemented and observed during and following completion of construction. Conventional footing foundations constructed on or into the underlying dense advance outwash soil may be used to support the proposed residential buildings, except in the southwest area at the west end of the site where liquefaction hazard exists. Unsuitable surficial topsoil and weathered soil should be stripped within footprint of roads, driveways, parking areas, and areas of structural fill.

The surficial topsoil and weathered soil contain a high percentage of fines and can be easily disturbed when saturated. Grading work in wet winter months may cause complication and difficulty. Therefore, grading and foundation construction work should be scheduled and completed between April 1 and October 31, if possible. Otherwise, erosion protection and drainage control measures recommended in this report should be implemented for site stabilization and to facilitate earthwork if it is to be carried out beyond the above dryer period.

TEMPORARY DRAINAGE AND EROSION CONTROL

The onsite surficial weak soils are sensitive to moisture and can be easily disturbed by construction traffic when saturated. A layer of clean, 2-to-4-inch quarry spalls should be placed over areas of frequent traffic, such as the entrances to the site, as required, to protect the subgrade soils from disturbance by construction traffic.

A silt fence should be installed along the downhill sides of construction areas to minimize transport of sediment by storm runoff onto neighboring properties or the street. The bottom of the filter cloth of the silt fences should be anchored in a trench filled with onsite soil.

Intercepting ditches or trench drains should be installed around the construction areas, as required, to intercept and drain away storm runoff and near-surface groundwater seepage. Water captured by such ditches or trench drains should be stored in temporary holding and settling pits onsite. Only clear and clean water may be discharged into wetlands within the site or into nearby storm inlet. The storm inlet into which collected stormwater

is to be discharged should be covered with a non-woven filter fabric sock to prevent sediment from entering the storm sewer system. The filter sock should be cleaned frequently during construction to prevent clogging, and should be removed after completion of construction.

Spoil soils should be hauled off of the site as soon as possible. Spoil soils and imported structural fill material to be stored onsite should be stockpiled in areas where the ground is no steeper than 15% grade. Stockpiled spoil soils should be securely covered with plastic tarps, as required, for protection against erosion.

SITE PREPARATION AND GENERAL GRADING

Vegetation within construction limits should be cleared and grubbed. Existing structures to be demolished should also have their foundations removed. Loose topsoil and weak weathered soil should be completely stripped down to dense advance outwash soil within the building pads of proposed residences; while topsoil and unsuitable soil in the root zone should be stripped down to the medium-dense weathered soil and/or dense advance outwash soil within paved roads, driveways and parking areas. The exposed soils should be compacted to a non-yielding state with a mechanical compactor and proof-rolled with a piece of heavy earthwork equipment prior to roads, driveways, and parking area construction.

EXCAVATION AND FILL SLOPES

Under no circumstance should excavation slopes be steeper than the limits specified by local, state and federal safety regulations if workers have to perform construction work in