City of Bellevue
Development Services Department
Land Use Division Staff Report

Proposal Name:	Puget Sound Energy (PSE) - Energize Eastside South Bellevue Segment
Proposal Address:	Substation - 13625 SE 30th Street and south to the Bellevue city limits at 6927 128th Place SE within the Puget Sound Energy (PSE) existing transmission line corridor.
Proposal Description:	Recommendation of approval on Conditional Use Permit and Administrative Approval of Critical Areas Land Use Permit for the construction of a new substation and 230 kV transmission lines in the City of Bellevue. PSE plans to construct a new substation in Bellevue ("Richards Creek substation") and to upgrade approximately 16 miles of two existing 115 kV transmission lines with 230 kV lines across multiple jurisdictions from Redmond to Renton (collectively referred to as the "Energize Eastside project" or "the Project"). In Bellevue, PSE is applying for permits to construct the Project in two phases. The first phase ("South Bellevue Segment"), the subject of PSE's proposal and this Staff Report, includes upgrading 3.3 miles (Bellevue portion) of existing 115 kV lines with 230 kV lines between the Lakeside substation and the southern city limits of Bellevue. The remainder of the southern portion of the Project crosses Newcastle and an area of unincorporated King County, and terminates in Renton. Bellevue only has permitting authority for work proposed in its jurisdiction. PSE's proposal involves the replacement of existing wooden H-frame poles with steel monopoles. Within the existing utility corridor, the proposed pole locations for the rebuilt lines will generally be in the same locations as the existing poles. Construction of the Richards Creek substation, a new 230 kV to 115 kV substation, will be directly south of PSE's existing Lakeside switching station. The new substation will be located on parcel 102405-9130 (13625 SE 30th Street), which is currently used as a PSE pole storage yard. The parcel is 8.46 acres in size and contains critical areas (steep slopes, wetlands, and streams). Access to the substation site is from SE 30th Street.
File Numbers:	17-120556-LB and 17-120557-LO
Planner:	Heidi M. Bedwell, Environmental Planning Manager
Applicant:	PSE Bradley Strauch
Recommendations Included:	Conditional Use Permit (Process I, Land Use Code 20.30B)
Decisions Included:	Critical Areas Land Use Permit (Process II, Land Use Code 20.30P)
Director's Recommendation:	**Approval with Conditions** Mike Brennan, Director Development Services Department By: _____ Elizabeth Stead, Land Use Director

City of Bellevue
Development Services Department
Land Use Division Staff Report

Application Date:	September 8, 2017
Notice of Application:	October 12, 2017
Public Meetings:	November 14, 2017; September 6, 2018
Recommendation/Decision Publication Date:	January 24, 2019
Pre-Hearing Conference Date:	February 13, 2019 at 10:30 a.m.
Public Hearing:	March 28, 2019 at 6:00 p.m.

Deadline for Appeal of Process II Administrative Decision

- Critical Areas Land Use Permit: February 7, 2019 (14 days following publication of a notice of decision)

For information on how to appeal a City of Bellevue land use decision, visit https://bellevuewa.gov/city-government/departments/city-clerks-office/hearing-examiners-office/how-to-file-an-appeal or call the Hearing Examiner's Office425-452-6934. Appeal of any Process II Administrative decision must be made by 5 p.m. on the date noted for appeal of the decision. Appeal of the Critical Areas Land Use Permit decision must be made to the City of Bellevue City Clerk's Office.

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I. REQUEST AND REVIEW PROCESS

A. Request

Puget Sound Energy, Inc. (PSE) has applied to the City of Bellevue for a Conditional Use Permit and a Critical Areas Land Use Permit for the construction of a new substation and 230 kilovolt (kV) transmission lines. PSE proposes the construction of a new substation in Bellevue (the "Richards Creek substation") and the upgrade of 16 miles of two existing 115 kV transmission lines with 230 kV lines from Redmond to Renton (collectively referred to as the "Energize Eastside project" or "the Project"). PSE is applying for permits to construct the Energize Eastside project in two phases. PSE has applied for permits for the first construction phase of the total Project in Bellevue, unincorporated King County, the City of Newcastle, and the City of Renton.

The first phase of the Energize Eastside project in Bellevue (the "South Bellevue Segment") is the subject of this Staff Report. The South Bellevue Segment includes construction of the Richards Creek substation and upgrading 3.3 miles (the Bellevue portion) of existing 115 kV transmission lines with 230 kV lines between the Lakeside substation and the southern city limits of Bellevue. The remainder of the south portion of the Project continues through Newcastle, unincorporated King County, and Renton. Bellevue only has permitting authority for work proposed in its jurisdiction. The Project and PSE's specific proposal for the South Bellevue Segment involves the replacement of existing wooden H-frame poles with steel monopoles. Within the existing utility corridor, the proposed pole locations for the rebuilt lines will generally be in the same locations as the existing poles.

The Richards Creek substation, needed to step down voltage from 230 kV to 115 kV, will be constructed directly south of PSE's existing Lakeside switching station. The new substation will be located on parcel 102405-9130 (13625 SE 30th Street), currently used as a PSE pole storage yard. The parcel is 8.46 acres in size and contains critical areas (steep slopes, wetlands, and streams). Access to the substation site is from SE 30th Street.

B. Review Process

The City of Bellevue review process for the Energize Eastside project began with pre-submittal public outreach conducted by PSE in coordination with City staff, followed by completion of technical studies and the preparation of an Environmental Impact Statement (EIS), with the Final EIS published in March 2018.[1]

[1] The Final EIS and supporting documentation are incorporated by reference under the terms of Bellevue City Code (BCC) 22.02.020 and Washington Administrative Code (WAC) 197-11-635. The Final EIS and supporting documentation is publicly available at: http://www.energizeeastsideeis.org/library.html. In addition, the Final EIS together with the supporting documentation are available for review in the City of Bellevue Records Room, Lobby Floor, Bellevue City Hall, 450 110th Avenue NE. The Final EIS is also included in the

PSE submitted permit applications for its South Bellevue Segment proposal in September 2017. Public noticing of PSE's application was provided through a radius mailing and a mailing to interested parties (including those identified through the EIS process), publication in the City's Weekly Permit Bulletin, and installation of six notice signs. As required by the City of Bellevue Land Use Code (LUC), two public meetings were held following the application and prior to making the recommendation and decision contained in this Staff Report. The review also included collection of public comments, revision requests from the City of Bellevue's Environmental Planning Manager to PSE, and PSE's responses to the City's requests. Notice of publication of this Staff Report was also provided through mailings, and the City's Weekly Permit Bulletin, as required by code.

The City of Bellevue LUC requires different review processes for different permit types. In this case, PSE's proposal includes both a Process I (LUC 20.35.100 - Hearing Examiner quasi-judicial decision) and a Process II (LUC 20.35.200 - Administrative decision) permit application, each of which is described below, along with a summary of the associated appeal opportunities.

A Critical Areas Land Use Permit (CALUP) is a Process II land use decision, an administrative decision made by the Director of the Development Services Department (DSD). A CALUP is required per LUC 20.25H.055, Uses and Development Allowed within Critical Areas. PSE's proposed use is a Utility System, and portions of the South Bellevue Segment proposal will be located within critical areas and critical area buffers and structure setbacks. Appeal of a Process II decision is consolidated with the Process I public hearing on the recommendation for the Conditional Use Permit (CUP), described below. Following a hearing before the Hearing Examiner on a Process II appeal of the CALUP, the Hearing Examiner issues a decision on the Process II appeal, and this Hearing Examiner decision may be appealed to Superior Court (LUC 20.35.250.F).

A CUP is a Process I land use decision processed pursuant to LUC 20.35.100 to 20.35.140. A Process I land use decision is a quasi-judicial decision issued by the Hearing Examiner following the recommendation of the Director and input received at the required public hearing. Per LUC 20.20.255.C, a CUP is required for new or expanding electrical utility facilities proposed on sensitive sites as described by Figure UT.5a (revised to Map UT-7) of the Utilities Element of the City of Bellevue Comprehensive Plan (UT Element 2015).[2] The decision of the Hearing Examiner on a Process I application is final unless appealed to the City Council. The City Council action deciding any appeal and approving,

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Department of Development Services (DSD) official files for Permit Nos. 17-120556-LB and 17-120557-LO.

[2] The UT Element of the Comprehensive Plan, including Map UT-7, is available on the City's website at: https://bellevuewa.gov/UserFiles/Servers/Server_4779004/File/pdf/PCD/07_Utilities_FINAL_20150807.pdf. Comprehensive Plan Map UT-7 is also included as Attachment F to this Staff Report.

approving with modifications, or denying a project is the final City decision on a Process I application. A final decision by the City Council following a Process I appeal may be appealed to Superior Court (LUC 20.35.150.D).

II. PROPOSAL DESCRIPTION

A. Purpose

The purpose of the Energize Eastside project is to meet local demand growth and to protect reliability in the Eastside of King County, roughly defined as extending from Redmond in the north to Renton in the south, and between Lake Washington and Lake Sammamish. It is PSE's responsibility to plan and operate the electrical system while complying with federal standards and guidelines.

The purpose of the Project defined PSE's broad objectives as follows:

- Address PSE's identified deficiency in transmission capacity.
- Find a solution that can be feasibly implemented before system reliability is impaired.
- Be of reasonable Project cost.
- Meet federal, state, and local regulatory requirements.
- Address PSE's electrical and non-electrical criteria for the Project.

Electricity is currently delivered to the Eastside area through two 230 kV/115 kV bulk electric substations – the Sammamish substation in Redmond and the Talbot Hill substation in Renton – and distributed to neighborhood distribution substations using 115 kV transmission lines (see Figure II-1). Although numerous upgrades have been made to PSE's 115 kV systems (including new transmission lines), the primary 115 kV transmission lines connecting the Sammamish and Talbot Hill substations have not been upgraded since the 1960s, and no 230 kV-to-115 kV transformer upgrades have been made at these substations. Since then, the Eastside population has grown from approximately 50,000 to nearly 400,000. Both population and employment growth are expected to continue, but at a slower pace of around 2% per year, according to Puget Sound Regional Council (PSRC) estimates. A report prepared for PSE projects that electrical customer demand on the Eastside will grow at a rate of approximately 2.4% per year through 2024.[3]

[3] Quanta Services, 2015. Supplemental Eastside Needs Assessment Report, Transmission System, King County. Prepared for Puget Sound Energy, April 2015 (hereinafter "Quanta Supplemental Eastside Needs Assessment Report"). The Quanta Supplemental Eastside Needs Assessment Report is included in the Phase I Energize Eastside project EIS materials and is publicly available at: http://www.energizeeastsideeis.org/library.html. In addition, the Quanta Supplemental Eastside Needs Assessment Report is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

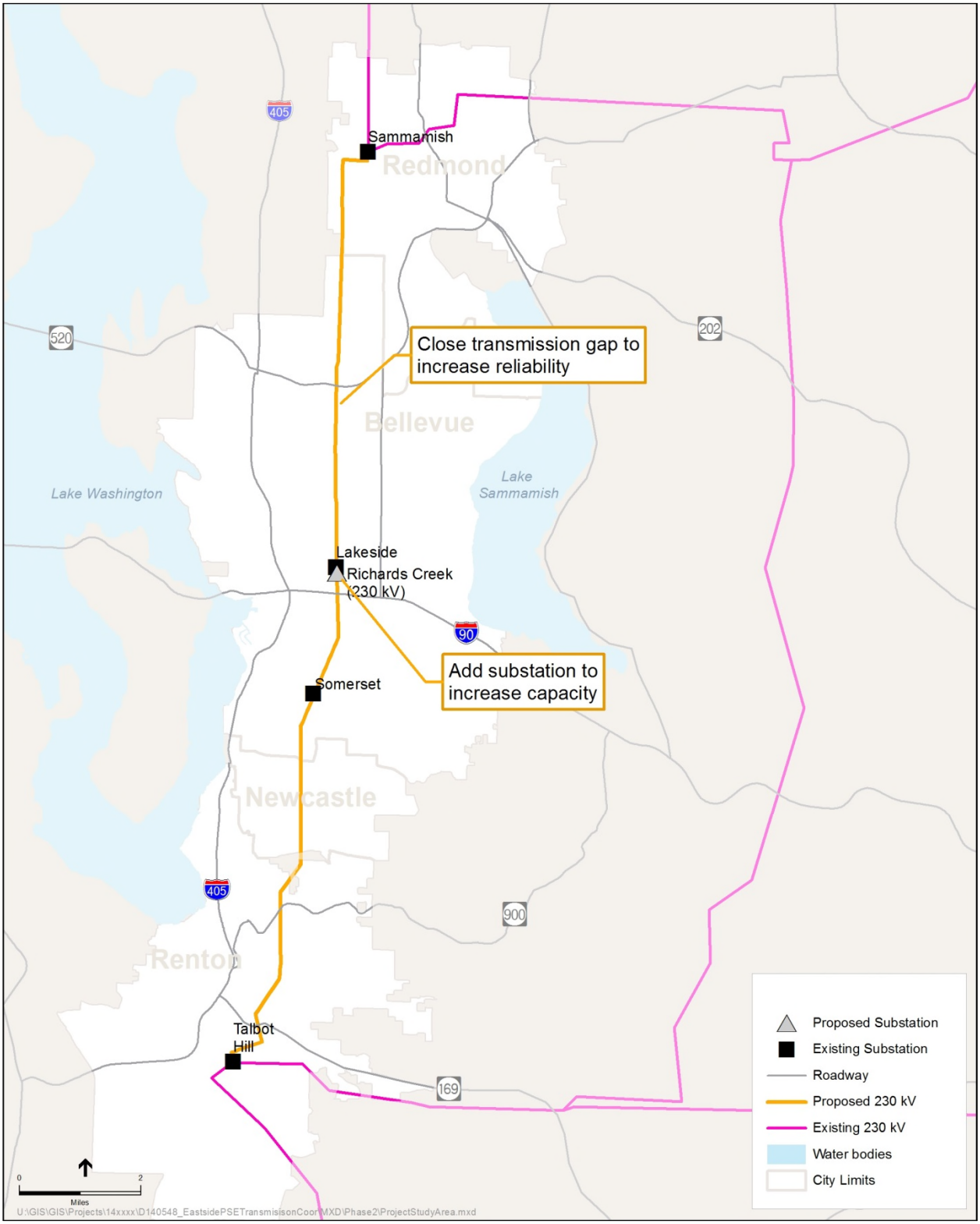

Figure II-1 Proposed 230 kV Transmission Line Route for the Energize Eastside Project

As required by federal regulations, PSE performs annual electric transmission planning studies to determine if there are potential system performance violations (transformer and line overloads) under various operational and forecasted electrical use scenarios. These studies are generally referred to as "reliability assessments."

The need for additional 230 kV-to-115 kV transmission transformer capacity and 230 kV support in the Eastside was identified in the 1993 annual reliability assessment, and has been included in PSE's Electrical Facilities Plan for King County (System Plan) since that time.[4] In 2009, PSE's annual reliability assessment found that if one of the Talbot Hill substation transformers failed, it would significantly impair reliability on the Eastside. Replacement of a failed 230 kV transformer can take weeks, or even months, to complete depending on the level of failure and other site-specific parameters. Since 2009, other reliability deficits have been identified. These include concerns over the projected future loading on the Talbot Hill substation and increased use of Corrective Action Plans (CAPs) to manage outage risks to customers in this portion of the PSE system.

Between 2012 and 2015, PSE and the City of Bellevue commissioned three separate studies by two different parties that confirmed the need to address Eastside transmission capacity:

- City of Bellevue Electrical Reliability Study prepared by Exponent, 2012.[5]
- The Quanta Eastside Needs Assessment Report, 2013.[6]
- The Quanta Supplemental Eastside Needs Assessment Report, 2015.

The Quanta Eastside Needs Assessment Report and Supplemental Eastside Needs Assessment Report, performed by Gentile (with Quanta Technology) for PSE in 2013 and 2015, respectively, confirmed that if growth in demand continued as projected, then the Eastside's existing grid would not meet federal reliability requirements by the winter of

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[4] PSE's September 2017 "Energize Eastside Conditional Use Permit, Description of Proposal – South Bellevue Segment" (hereinafter "PSE South Bellevue Segment CUP Analysis") was submitted in connection with the application for Permit Nos. 17-120556-LB and 17-120557-LO and is included in this Staff Report as Attachment C. Page 36 of the PSE South Bellevue Segment CUP Analysis contains quotations from PSE's System Plan.

[5] Exponent. 2012. City of Bellevue Electrical Reliability Study, Phase 2 Report. Prepared for the City of Bellevue, dated February 2012. The Electrical Reliability Study, Phase 2 Report, prepared by Exponent (hereinafter "Exponent 2012") is publicly available at: http://www.energizeeastsideeis.org/uploads/4/7/3/1/47314045/final_electrical_reliability_study_phase_ii_report_2012.pdf. In addition, Exponent 2012 is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

[6] Quanta Services, 2013. Eastside Needs Assessment Report, Transmission System, King County. Prepared for PSE in October 2013 and updated February 2014 (hereinafter "Quanta Eastside Needs Assessment Report"). The Quanta Eastside Needs Assessment Report is included in the Phase I Energize Eastside Project EIS materials and is publicly available at: http://www.energizeeastsideeis.org/library.html. In addition, the Quanta Eastside Needs Assessment Report is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

2017/2018 and the summer of 2018 without the addition of 230 kV-to-115 kV transformer capacity in the Eastside area.

Furthermore, the City of Bellevue commissioned a separate study to evaluate PSE's system, which also confirmed the need for the Energize Eastside project.[7] As part of the EIS prepared for the Energize Eastside project, in 2015, Stantec Consulting Services Inc. also reviewed PSE's analysis and determined that the approach to the needs assessment followed standard industry practice.[8]

In June 2018, PSE notified the City of Bellevue that the actual peak demand in the summer of 2017 was equal to the peak demand projected for summer 2018, and warned that during peak summer demand periods CAPs would be in place that include intentional load shedding (rolling blackouts) for Eastside customers.[9] Following a request for additional information from the City, PSE explained that it did not perform any analysis on the electrical loads for the August 2017 dates, but increased air conditioning was a likely contributor.[10] PSE's planning-level modeling found that both summer and winter peak customer load were driving the need for additional transmission capacity. Additional information regarding PSE's determination of operational need is discussed in **Section VIII.C** of this Staff Report in connection with Electrical Utility Facilities Decision Criteria LUC 20.20.255.E.3.

B. Background

The Utilities (UT) Element policies of the Comprehensive Plan and LUC 20.20.255 – Electrical Utility Facilities, govern the review and approval of new and expanding electrical utility facilities. Pursuant to LUC 20.20.255, any new or expanding electrical facility proposal identified as a sensitive site requires an Alternative Siting Analysis. The transmission corridor alignment and new electrical utility facility components (substation) within the alignment in the South Bellevue Segment are identified as sensitive sites on Map UT-7 of the UT Element (see Attachment F to this Staff Report).

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[7] Utility System Efficiencies, Inc. (USE), Independent Technical Analysis of Energize Eastside for the City of Bellevue, WA. Version 1.3., dated April 28, 2015 (hereinafter "USE 2015"). USE 2015 is included in this Staff Report as Attachment D.

[8] Stantec, 2015. Review Memo on the Eastside Needs Assessment Report. Prepared for Environmental Science Associates (ESA), Seattle, WA; prepared by Stantec Consulting Services, Inc., Markham, OR, dated July 31, 2015 (hereinafter "Stantec 2015"). Stantec 2015 is included in the Energize Eastside Project EIS materials and is publicly available at: http://www.energizeeastsideeis.org/library.html. In addition, Stantec 2015 is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

[9] Letter from Dan Koch, PSE Director of Electric Operations, to Brad Miyake, City Manager of the City of Bellevue, dated June 8, 2018. PSE's June 8, 2018 letter (PSE 6-8-18) is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

[10] Email from Brad Strauch, PSE Program Manager, to Heidi Bedwell, City of Bellevue Environmental Planning Manager, dated October 26, 2018 at 4:47 PM. PSE's October 26, 2018 email (PSE 10-26-18) is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

PSE began working with residents of Bellevue and City staff several years prior to submittal of the CUP and CALUP applications to determine the best possible route for the transmission lines. This included coordination with a Community Advisory Group (CAG), City staff, and the public. The Alternative Siting Analysis described in **Section IV.A.1** of this Staff Report further describes the outreach efforts and criteria PSE used to arrive at the selection of its preferred alternative (i.e., PSE's proposed alignment).[11]

The EIS process also provided opportunities for public input, including scoping meetings and opportunities to comment on two draft EISs prior to publication of the Final EIS in March 2018. The Phase 1 Draft EIS provided a programmatic assessment of various wire and non-wire alternatives to address PSE's Project objective, which is to address a projected deficiency in its transmission system and increase system reliability.[12] The Phase 1 Draft EIS helped inform the City and PSE regarding the impacts of the various alternatives and helped to develop the scope of the Phase 2 Draft EIS, both in terms of the range of alternatives needed and the impacts that needed to be further evaluated.

The Phase 2 Draft EIS provided a project-level assessment of impacts across all jurisdictions with respect to PSE's proposed transmission lines and the Richards Creek substation.[13] The Phase 2 Draft EIS examined four alignment options between the proposed Richards Creek substation and the southern city limits of Bellevue, referred to in the EIS as the Willow 1, Willow 2, Oak 1, and Oak 2 Options. In the Final EIS, the Willow 1 Option design was refined and referred to as PSE's proposed alignment. PSE's proposed alignment in the Final EIS is the same as is proposed for the permit applications evaluated in this Staff Report.

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[11] PSE's September 2017 Alternative Siting Analysis, submitted in connection with the application for Permit Nos. 17-120556-LB and 17-120557-LO, is included as Attachment B to this Staff Report.

[12]The Phase I Draft EIS and supporting documentation are incorporated by reference under the terms of BCC 22.02.020 and WAC 197-11-635. The Phase I Draft EIS and supporting documentation is publicly available at: http://www.energizeeastsideeis.org/library.html. In addition, the Phase I Draft EIS and supporting documentation are available for review in the City of Bellevue Records Room, Lobby Floor, Bellevue City Hall, 450 110th Avenue NE. The Phase I Draft EIS is also included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

[13]The Phase 2 Draft EIS and supporting documentation are incorporated by reference under the terms of BCC 22.02.020 and WAC 197-11-635. The Phase 2 Draft EIS and supporting documentation is publicly available at: http://www.energizeeastsideeis.org/library.html. In addition, the Phase 2 Draft EIS and supporting documentation are available for review in the City of Bellevue Records Room, Lobby Floor, Bellevue City Hall, 450 110th Avenue NE. The Phase 2 Draft EIS is also included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

C. Substation Upgrades[14]

A component of PSE's proposal is to develop the Richards Creek substation south of PSE's existing Lakeside substation at 13625 SE 30th Street (parcel 102405-9130) (Figure II-2). The 8.46-acre property is zoned Light Industrial (LI) as are the properties to the north, west, and south. Properties east of the site are zoned Office and Limited Business (OLB) and Multifamily Residential (R-10). The central portion of the site is currently used by PSE as a pole storage yard. It is partially fenced and has a flat storage area consisting of paved driveways and gravel.

The Richards Creek substation is a necessary component of the 115 kV alignment upgrade to 230 kV, which is mapped as a sensitive site in the City's Comprehensive Plan (see Attachment F to this Staff Report [Map UT-7]). Normal practice would be to have the 230 kV Richards Creek substation co-located with the adjoining 115 kV Lakeside substation; however, due to topographic and environmental constraints south of the Lakeside substation, expanding the station in that direction would result in additional environmental impacts. Therefore, placing the two stations on separate parcels is proposed. Because the two yards have separate access points, they are required to have different names for operational and emergency purposes.

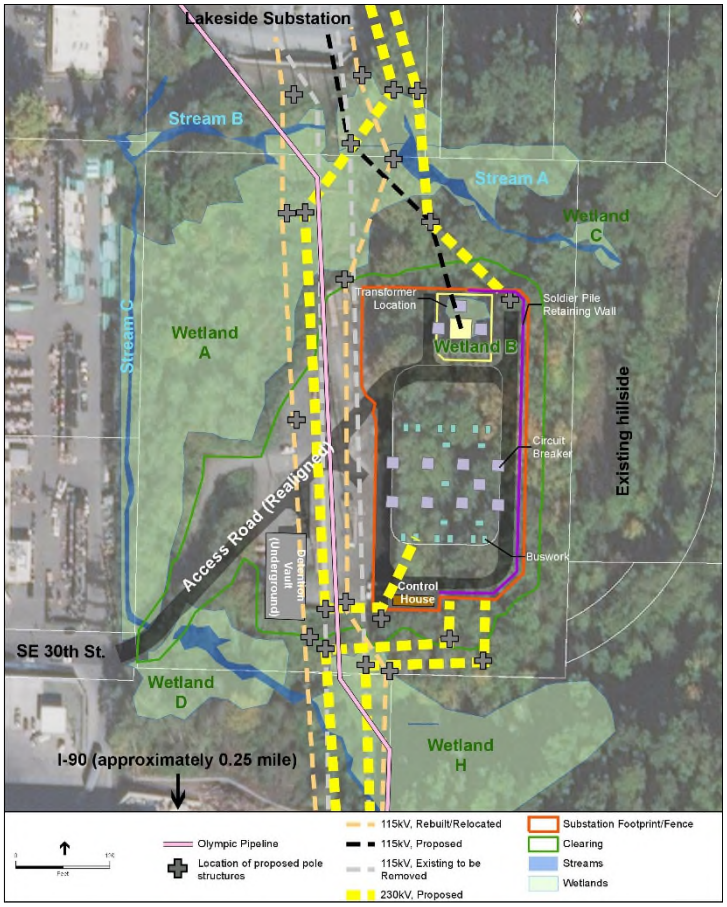

Figure II-2 Richards Creek Substation Site

Construction of the new substation requires clearing and grading to create a level area for the new transformer and supporting equipment. An approximately 25-foot high soldier-pile retaining wall on the east side of the parcel is proposed. The preliminary grading quantities provided by PSE are an estimated 27,480 cubic yards of excavation and 8,000 cubic yards of fill. Approximately 3,550 truck trips will be associated with excavation. Most excavated material will be removed, but some could be used to backfill and restore grades.

The drainage control system at the site requires trenching, placement of pipes, and connection to the City storm drainage system. Access to the substation site is via SE 30th Street. The existing driveway and access road will be paved and reconfigured. The

[14] PSE's Project Plans, submitted in connection with the application for Permit Nos. 17-120556-LB and 17-120557-LO, are included as Attachment A to this Staff Report.

reconfigured access road will be constructed of asphalt approximately 20 feet wide in general, 24 feet wide at the corners, and with 2-foot shoulders. A culvert replacement on the access road will be constructed in accordance with aquatic permit requirements, including limits on the timing for construction, protection of water quality, and other measures to protect stream and wetland habitat.

The substation yard will be surfaced with crushed rock. The substation will include the transformer and supporting equipment (e.g., circuit breakers, electrical buswork, control house, and connections to the new transmission lines). Concrete foundations will be poured to support this equipment, and the substation is designed in accordance with regulatory requirements and industry standards. All unpaved disturbed areas will be planted to control erosion and meet landscaping requirements. Construction will include the installation of appurtenant utilities, such as natural gas, water, and sewer pipelines, as well as transmission lines.

In addition to the construction of the new Richards Creek substation, some construction is proposed to accomplish the planned upgrades to the Lakeside substation. In general, all upgrades will occur within the existing footprint of the Lakeside substation. Work includes connecting the substation equipment to the new 230 kV transmission lines, including potential pole replacement and related grading and excavation. An existing 115 kV transmission line known as the Lakeside-Goodes Corner shares poles with the existing Lakeside-Talbot Hill No. 2 transmission line from the Lakeside substation to the south side of Interstate 90 (I-90). Because these poles will be replaced by the Energize Eastside project, the Lakeside-Goodes Corner transmission line also needs to be accommodated by the new poles. The line is shown on the plans connecting to a new corner pole on the south side of I-90 and connecting to an existing line running to the east.

All substation modifications are required to meet the design standards of LUC 20.20.255.F. Landscaping will be required to further screen the facilities from the surrounding neighborhoods. **Refer to the Conditions of Approval regarding the final plans for substation upgrades in Section X of this Staff Report.**

D. Proposed Alignment

PSE selected the Willow 1 route option as its proposed alignment based on the public outreach and technical review that occurred during the CAG and EIS processes. The major deciding factors include but are not limited to the following:

- By using this substation site and the existing corridor, additional easements or properties are not required.
- By using the existing corridor, the fewest number of trees will need to be removed.
- Use of the Willow 1 route, combined with optimized transmission line design and 230/230 kV operation, allows for the lowest potential alternating current (AC) interaction with the two petroleum pipelines that share the corridor.

All of the routes analyzed to meet the purpose and need for the Project, including Willow 1, traverse residential land use districts. By constructing the proposed transmission line facilities in the existing 115 kV transmission line corridor, site compatibility impacts are limited by this alternative (see LUC 20.20.255.D.2.d). By using the existing corridor, PSE minimizes tree removal and management within the corridor as compared to establishing a new corridor (see Attachment B to this Staff Report [Alternative Siting Analysis]). By using

the existing corridor, PSE can also better assess and limit potential interactions with a co-located petroleum pipeline system, as well as a natural gas pipeline that crosses the corridor.[15] The creation of new impacts to adjacent uses, including residential uses, is also minimized by utilizing the existing corridor for the proposal. As properties adjacent to the transmission line corridor currently have utility facilities in their viewsheds and neighborhoods, Willow 1 has lower impacts compared to establishing a new corridor. The Willow 1 route is the most consistent with PSE's hierarchy of preferred locations.

Based on the results of the required Alternative Siting Analysis, PSE selected the Willow 1 route, which includes the South Bellevue Segment and is the alignment under consideration in this Staff Report (see Figure II-3). The proposed transmission line extends from the existing Lakeside substation and the new Richards Creek substation to the southern city limits of Bellevue, where it passes into Newcastle. The South Bellevue Segment is 3.3 miles long and entirely within PSE's existing approximately 100-foot wide transmission line corridor.

The transmission line includes a variety of pole types, which are shown on Figure II-3 and Table II-1. Sixteen double-circuit 230 kV steel monopoles (meaning each pole supports two 230-kV circuits, consisting of three conductors [wires] per circuit) will replace 22 wooden H-frames north of SE Newport Way and between Somerset substation and SE 60th Street. Typical pole height is approximately 92 feet, and the maximum pole height is approximately 109 feet. South of SE 60th Street and between SE Newport Way and the Somerset substation, 26 pairs of single-circuit 230 kV steel monopoles will replace 26 wooden H-frames. In this geographic area, typical pole height is approximately 80 feet, and the maximum pole height is approximately 91 feet.

Although each route option analyzed by PSE had a range of impacts, PSE determined that Willow 1 will have the fewest negative impacts to Bellevue residents after considering the many factors identified in the required Alternative Siting Analysis. Several impacts that could not be avoided through route selection will be minimized or mitigated through measures that PSE has incorporated into the Project design. Additional information regarding PSE's compliance with the Alternative Siting Analysis requirements of the LUC is discussed below in **Section IV.A.1** of this Staff Report.

E. Pole Design

The proposed pole designs are shown in Figure II-4. Information about each pole type, including line configuration, typical height, and diameter, is listed in Table II-1. Simulations showing the proposed pole types are also provided in Figures II-5 through II-8. Additional detailed information for all pole locations can be found in Attachment A, Project Plans.[16]

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[15] DNV GL. 2016. A Detailed Approach to Assess AC Interference Levels Between the Energize Eastside Transmission Line Project and the Existing Olympic Pipelines, OLP16 & OPL20. Memo to: Puget Sound Energy, dated September 9, 2016 (hereinafter "DNV GL 2016"). DNV GL 2016 is included in the Phase 2 Energize Eastside Project EIS materials and is publicly available at: http://www.energizeeastsideeis.org/library.html. In addition, DNV GL 2016 is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

[16] PSE's Photo Simulations are included as Attachment H to this Staff Report, and PSE's December 14, 2018 Pole Finishes Report-City of Bellevue (South) is Attachment J.

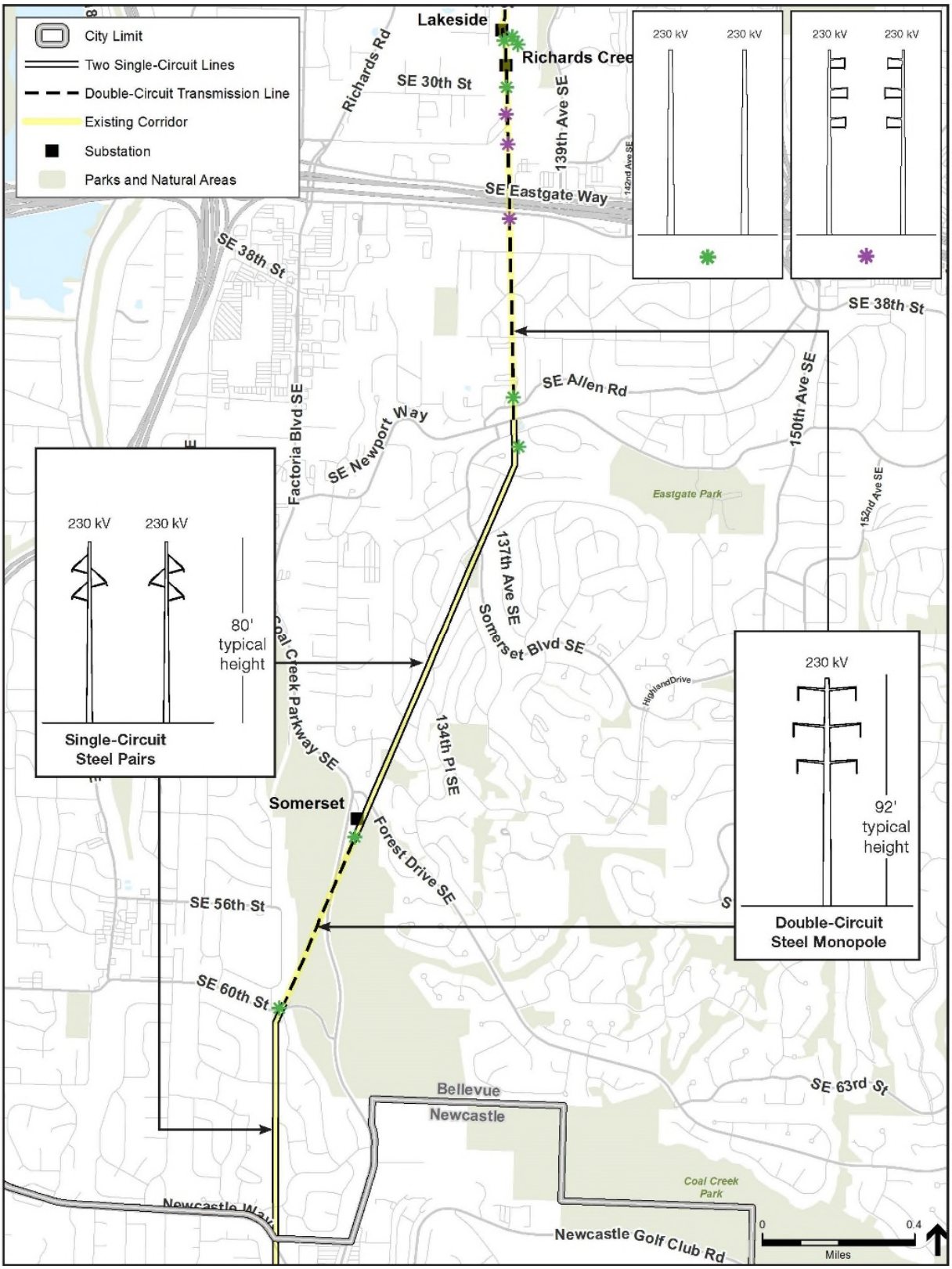
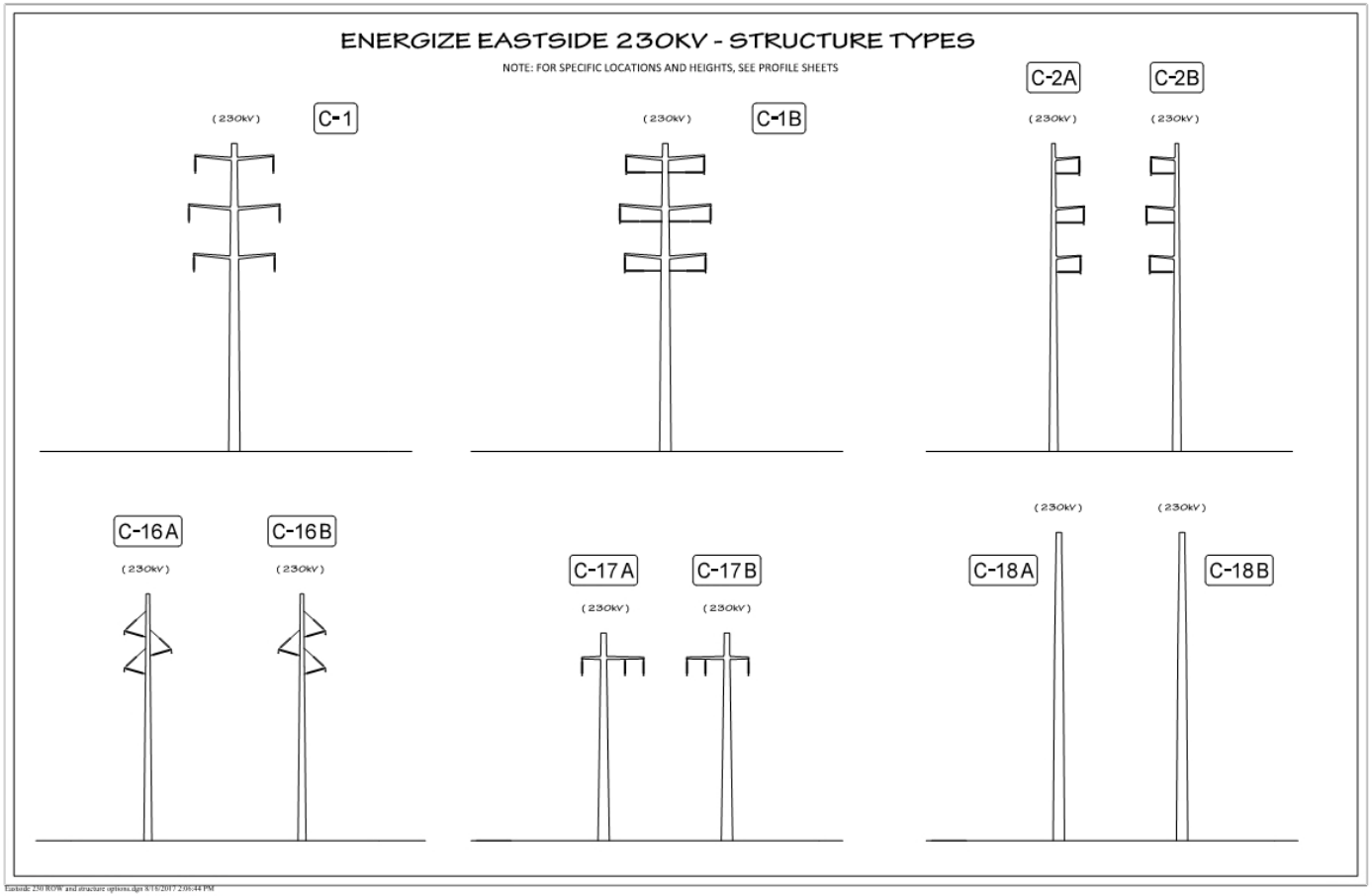


Figure II-3. Willow 1 Proposed Alignment



Structure Type	Naming Convention	Description
SCDE	C-18 A/B	Single circuit deadend
SCT	C-16 A/B	Single circuit tangent
DCT	C-1	Double circuit tangent (D denotes OHGW overhead groundwire)
DCA	C-1B	Double circuit angle - equiv to a C1 with a post brace to handle bigger angle
SCHDE	C-17 A/B	Single circuit horizontal deadend (only under SCL line)
SCA	C-2 A/B	Single circuit angle

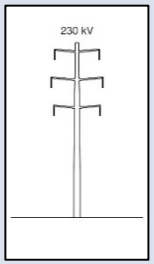
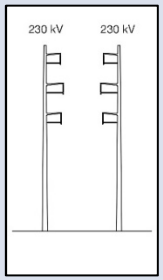
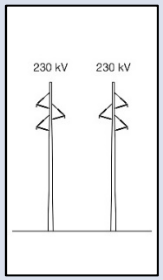
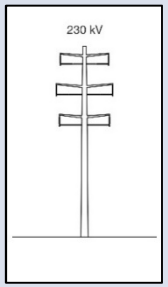
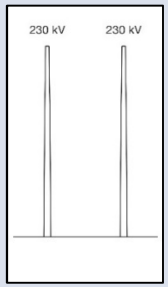
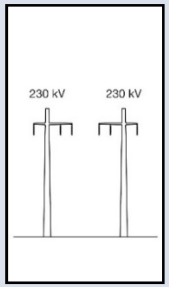
*number after type in table denotes angle

STRUCTURE TYPES
SOUTH BELLEVUE
BASED ON PSE ENGINEERING DESIGN REVISION K

Appendix A
Date: 8/20/2018

Figure II-4. Pole Structure Types

Table II-1. Pole Types

	C-1 pole	C-2 poles	C-16 poles	C-1B pole	C-18 poles	C-17 poles
Pole Type	One Double-Circuit Monopole	Two Single-Circuit Monopoles	Two Single-Circuit Monopoles	One Double-Circuit Monopole	Two Single-Circuit Monopoles	Two Single-Circuit Monopoles
Line Configuration	Six conductors total, three on each side of the pole	Three conductors stacked vertically on each pole	Three conductors stacked in a delta configuration (shown below)	Six conductors total, three on each side of the pole	Three conductors stacked vertically on each pole	Three conductors arrayed horizontally on each pole
Typical Height	95 feet	85 feet	79 feet	89 feet	91 feet	50 feet
Diameter (at base)	Typically 4.5–6 feet	Typically 3.5–5.5 feet	Typically 2.5–5.5 feet	Typically 4.5–6 feet	Typically 3.5–6.5 feet	Typically 3–5 feet
Diagram						
Simulation						No Simulation Available

Existing Pole Height: ~65-70 feet

Proposed Pole Height: ~70-100 feet

Figure II-5. Existing and Proposed Conditions of Richards Creek Substation from SE 30th Street Looking East

Existing Pole Height: ~55 feet

Proposed Pole Height: ~75 feet

Figure II-6. Existing and Proposed Conditions from 4411 Somerset Drive SE Looking Southeast

Existing Pole Height: ~60 feet

Proposed Pole Height: ~95 feet

Figure II-7. Existing and Proposed Conditions from 13630 SE Allen Road Looking Northeast

Existing Pole Height: ~65 feet

Proposed Pole Height: ~90 feet

Figure II-8. Existing and Proposed Conditions from 13744 SE Allen Road Looking Northeast

F. Vegetation Removal

Vegetation management activities, including tree trimming and tree removal, are proposed to meet the North American Electric Reliability Corporation (NERC) vegetation management standards for electric transmission lines. The overall size of the vegetation management/maintenance area typically varies by transmission pole type (see Figures II-9 through II-11).

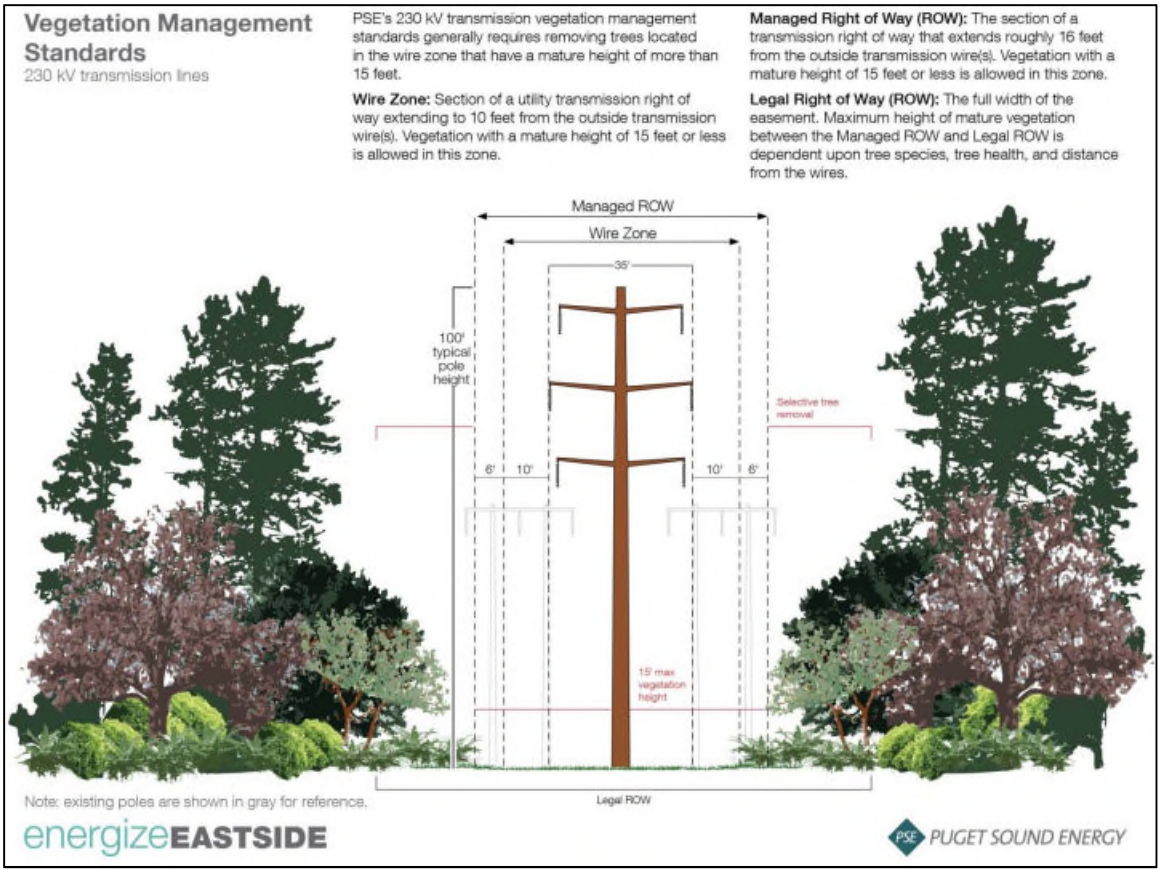


Figure II-9. Vegetation Management Standards (C-1 Pole Type)

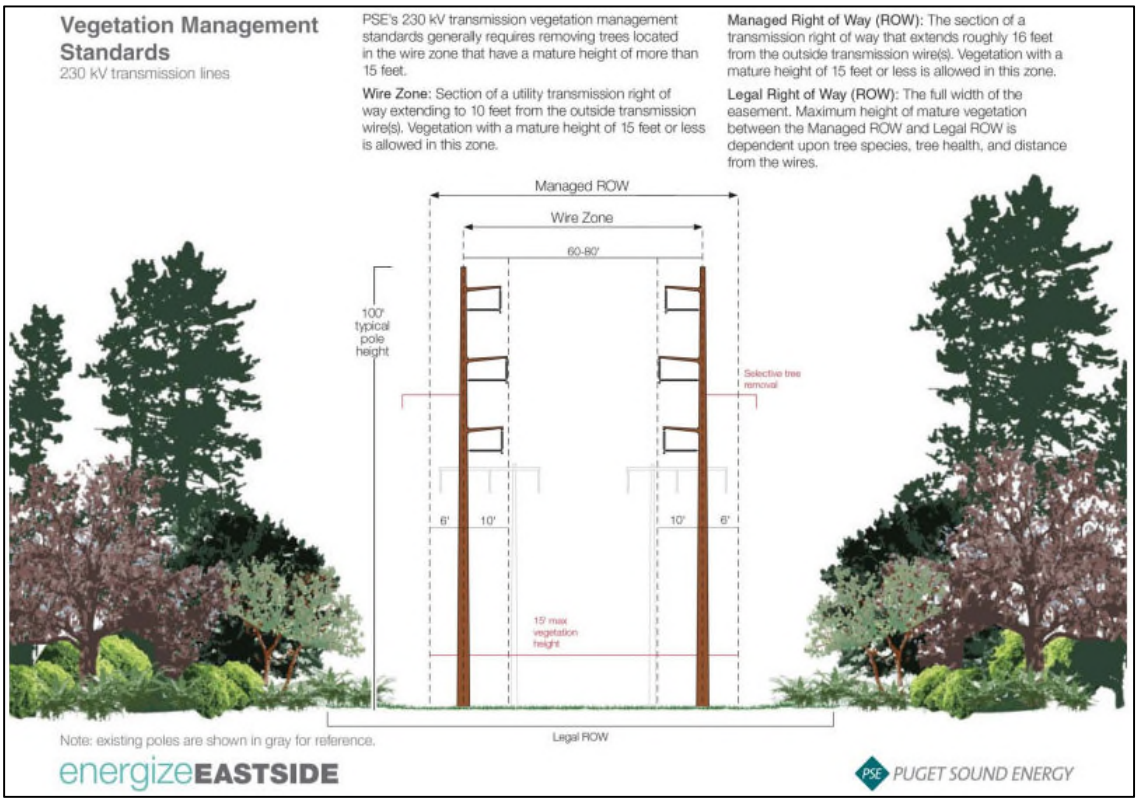


Figure II-10. Vegetation Management Standards (C-2 Pole Type)

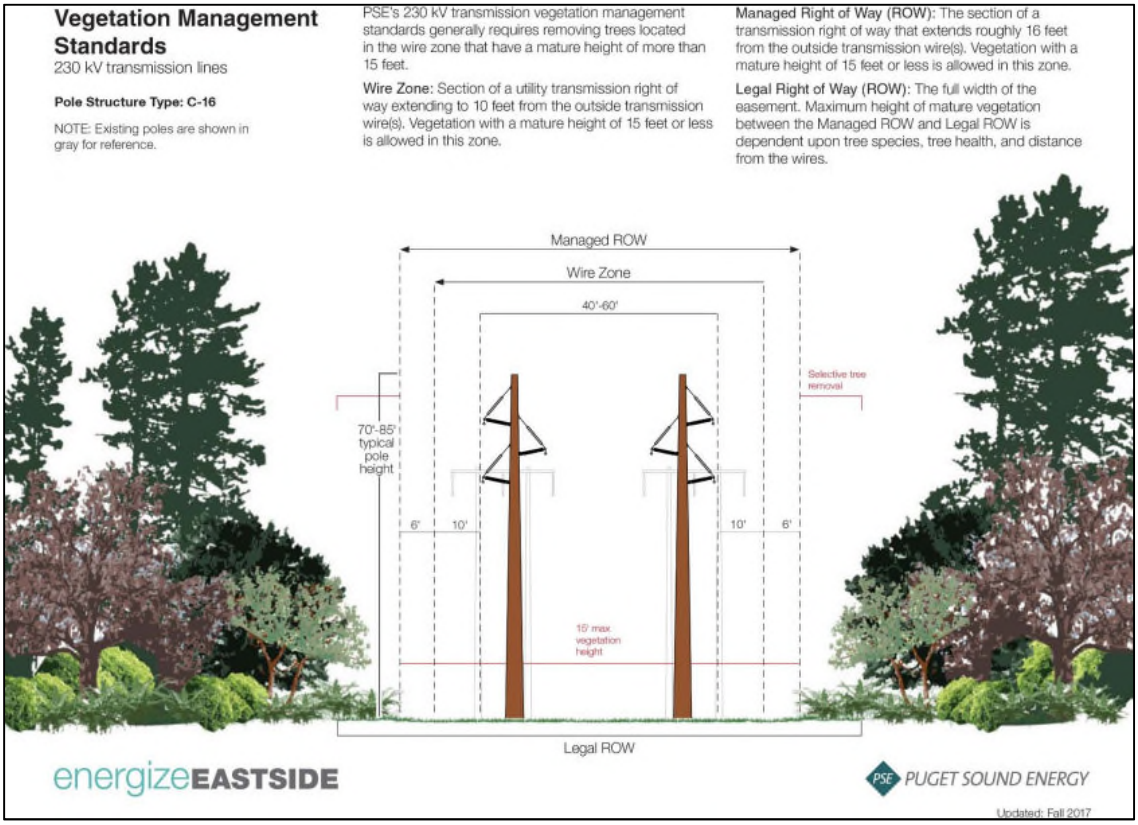


Figure II-11. Vegetation Management Standards (C-16 Pole Type)

Based on the strict application of these standards, PSE will remove any vegetation within the wire zone that matures to a height of more than 15 feet), unless terrain conditions allow at least 20 feet of clearance between the lowest conductor and the potential mature height of the vegetation.[17] Within the managed right-of-way, PSE will conduct selective vegetation removal and maintenance on a case-by-case basis based on the proximity of vegetation to its built infrastructure, as determined in the field by PSE vegetation maintenance crews. Trees outside of the managed right-of-way but within the legal right-of-way could also be trimmed to maintain at least 16 feet of clearance from the conductors, or removed based on a combination of tree height, species, health, and distance from the conductors. In general, it is assumed that trees with a height of 70 feet or greater between the managed right-of-way and the legal right-of-way will be removed, along with all dead or dying trees of any height. No trees are proposed for removal outside of the legal right-of-way as part of the Energize Eastside project.[18]

The transmission line and substation construction will require the removal of approximately 580 significant trees in the South Bellevue Segment as part of PSE's proposal due to NERC vegetation management standards. This tree removal is consistent with the analysis in the Final EIS (see Final EIS, Section 4.4.5). Of this total, approximately 95 trees are located either in the City right of way or within a City-owned (parks or utilities) property. Approximately 485 trees are located on non-city owned property, including the Richards Creek Substation property owned by PSE. Specifically, 108 trees are located on the Richards Creek Substation site, and the remaining 377 trees are located within the 3.3-mile South Bellevue Segment transmission corridor.

The Final EIS concluded that application of codes, standards, and regulations—including the City's critical areas requirements contained in Chapter 20.25H LUC—would adequately mitigate potential impacts due to vegetation removal in the South Bellevue Segment (see Final EIS, Section 4.4 & 4.4.5.6). **For a discussion of PSE's Tree Replacement Plan (included as Attachment E to this Staff Report), along with applicable City regulations and mitigation measures, refer to the State Environmental Policy Act (SEPA) review in Section VI and the Conditions of Approval in Section X of this Staff Report.**

III. SITE DESCRIPTION, ZONING/CONTEXT, and CRITICAL AREAS

A. Site Description

For the purposes of this Staff Report, PSE's proposal has been broken up into the substation and the South Bellevue Segment of the transmission line.

[17] PSE's August 30, 2017 Vegetation Management Plan, submitted in connection with the application for Permit Nos. 17-120556-LB and 17-120557-LO, is included as Attachment E to this Staff Report.

[18] See Letter from Brad Strauch, PSE Program Manager, to Heidi Bedwell, City of Bellevue Environmental Planning Manager, dated October 17, 2018. PSE's October 17, 2018 letter (PSE 10-17-18) is included in the Critical Areas Report, which is Attachment I to this Staff Report. PSE 10-17-18 is also included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

Richards Creek Substation. The property currently serves as a pole storage yard and has a utility corridor with existing transmission lines, water pipelines, and a petroleum pipeline through the center of the site. It is well screened from surrounding uses by mature vegetation (see Figure III-1 below).[19]

The site includes both slope wetlands (Wetlands A, B, C, and H), and riverine wetlands (Wetland D). Wetland A is a Category III wetland that is traversed by the existing PSE transmission line corridor, with areas of Himalayan blackberry and reed canarygrass monocultures. Wetland B is an undisturbed Category III wetland but is dominated by an understory of dense Himalayan blackberry. Wetland C is a small Category III forested slope wetland east of the proposed substation, and is dominated by a palustrine forested vegetation community including red alder, black cottonwood, salmonberry, and skunk cabbage. Wetland H is a Category II slope wetland that consists of native and non-native plant species, with prevalent invasive, non-native species in the existing transmission line corridor. Wetland D is a Category II wetland that, while comprised of native species, is also dominated by reed canarygrass, with some Himalayan blackberry.

Two stream systems are on or adjacent to the Richards Creek substation site. Stream A is an unnamed seasonal Type N stream that flows through Wetland C and into Wetland A. On the Critical Area Assessment Maps (see Attachment I to this Staff Report), Wetland A is shown to drain to Stream B and Stream F, which join and flow to Stream C, near the northeast corner of the site. This group of streams (Streams A, B, and F) is referred to below as the Stream A system. Habitat around this stream consists mainly of Wetland A and its buffer. The stream buffer for Stream C (East Creek a tributary to Richards Creek)

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[19] The Critical Areas Report required by Part 20.25H LUC is attached to this Staff Report as Attachment I. The Critical Areas Report is comprised of the following documents submitted by PSE during the land use process:

(1) January 21, 2019 Technical Memorandum/Revised CAR Addendum prepared by the Watershed Company;

(2) December 2018 Revised Critical Area Report prepared by the Watershed Company, along with the Mitigation Plans and Critical Area Assessment Maps attached thereto;

(3) July 11, 2017 Revised Targeted Geologic Hazard Evaluation, prepared by GeoEngineers, along with the August 21, 2017 Memorandum supplementing this GeoEngineers' Evaluation;

(4) Letter from Brad Strauch, PSE Program Manager, to Heidi Bedwell, City of Bellevue Environmental Planning Manager, dated November 5, 2018;

(5) October 11, 2018 Technical Memorandum prepared by the Watershed Company;

(6) Letter from Brad Strauch, PSE Program Manager, to Heidi Bedwell, City of Bellevue Environmental Planning Manager, dated September 21, 2018;

(7) September 14, 2018 Memorandum re Landslide Deposits, prepared by GeoEngineers;

(8) September 21, 2018 Memorandum re Geologic Hazards, prepared by GeoEngineers;

(9) December 19, 2014 Geologic Hazards Evaluation and Preliminary Geotechnical Engineering Services, prepared by GeoEngineers;

(10) June 8, 2016 Geotechnical Engineering Services Report for Energize Eastside Project, prepared by GeoEngineers; and

(11) PSE Avian Protection Plan.

is a Type F stream that flows along the west edge of the site and is crossed by the existing access road. It is joined at the northeast corner of the site by a short stream (Stream D) and by Stream B, as noted above. In the discussion below, East Creek a tributary to Richards Creek refers to Streams C and D. The existing stream channel along the proposed Richards Creek substation has a limited riparian area with vegetation primarily on the east side of the channel.

The Richards Creek substation site is bordered to the north by PSE's existing Lakeside substation, to the west by industrial development including a water and wastewater supply company, to the south by King County's Factoria Solid Waste Transfer Station, and upslope to the east by a stormwater detention facility tract that is heavily vegetated. The Chestnut Hill Academy is northeast of the proposed substation site. The substation use is consistent with the uses in the area and the current use of the site.

Transmission Line. The transmission line corridor is an existing utility corridor that was established in the late 1920s and early 1930s. The current uses adjacent to the corridor developed over time as areas were annexed into the City and these areas became more densely populated. In most cases the properties adjacent to the corridor have landscape vegetation and residential yard areas within the transmission easement. The Olympic Pipeline Company operates two underground petroleum pipelines in the transmission corridor.

This Staff Report analyzes the South Bellevue Segment of the transmission lines, which is the portion of the transmission lines included in PSE's proposal. The South Bellevue Segment has been further broken into the smaller segments, defined roughly as follows:

Segment 1: Lakeside substation south to Richards Creek substation.
Segment 2: Richards Creek substation south to Newport Way.
Segment 3: Newport Way south to Coal Creek Parkway.
Segment 4: Coal Creek Parkway south to SE 60th Street.
Segment 5: SE 60th Street south to City Limits.

See Figures III-1 through III-5.

The South Bellevue Segment of the transmission lines crosses three unnamed Type N streams and four unnamed Type F streams (tributaries of East, Sunset, and Coal creeks). Four wetlands are located at the Somerset substation site and there are 8 wetlands along the transmission line corridor itself (See Attachment I to Staff Report).

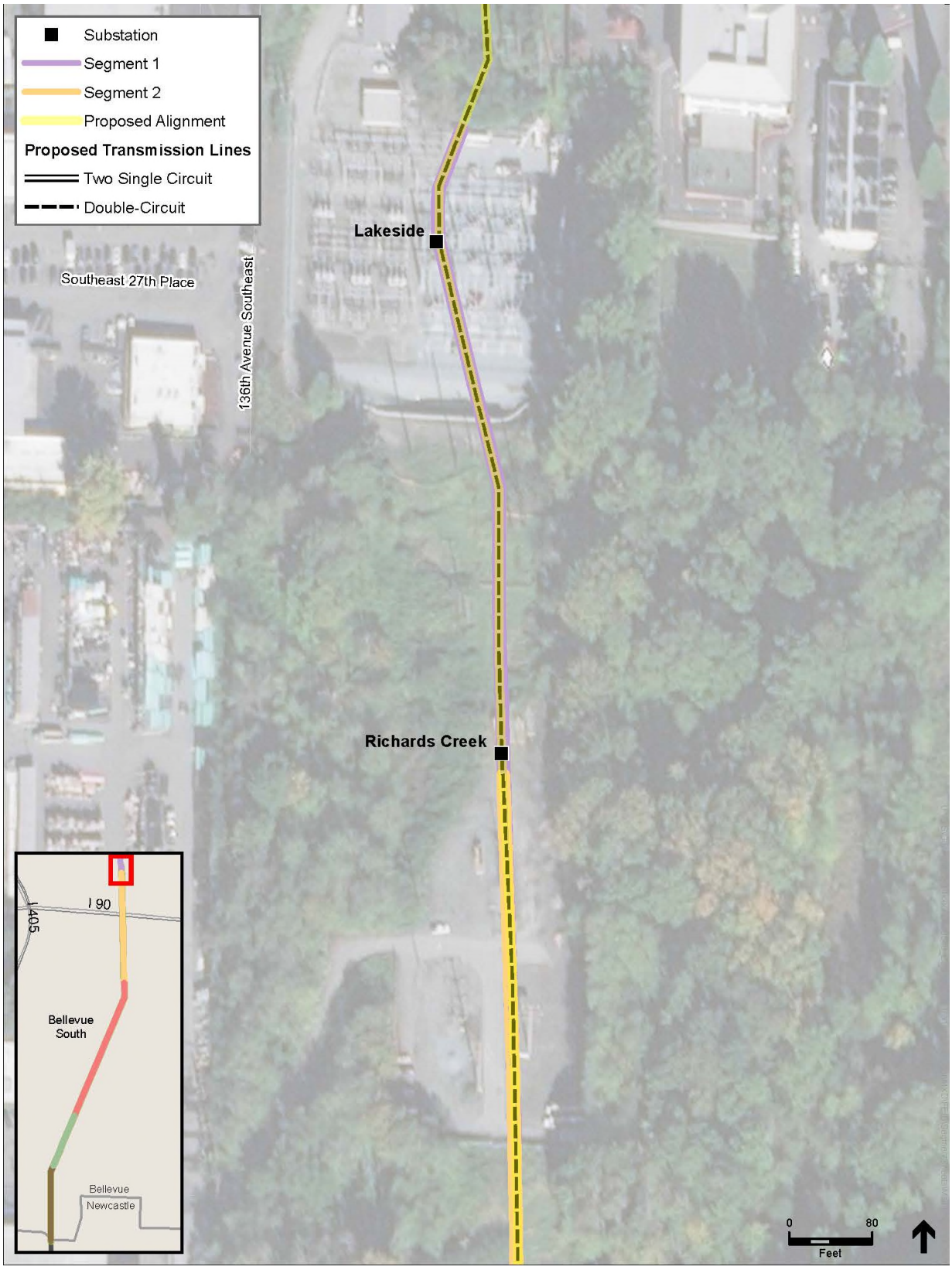

Figure III-1. Segment 1: Lakeside Substation to Richards Creek Substation

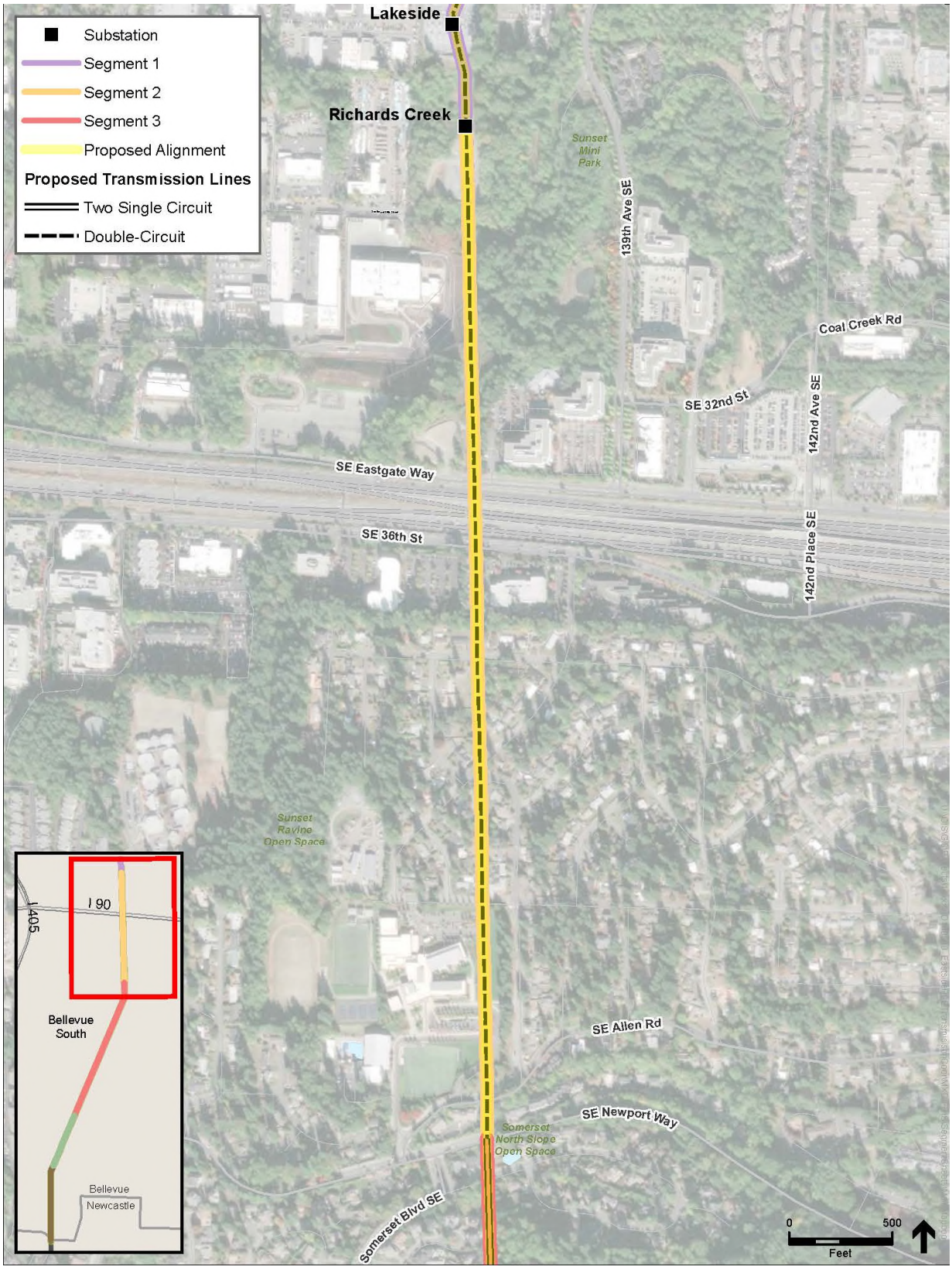

Figure III-2. Segment 2: Richards Creek Substation South to Newport Way

Figure III-3. Segment 3: Newport Way South to Coal Creek Parkway

Figure III-4. Segment 4 Coal Creek Parkway South to SE 60th Street

Figure III-5. Segment 5 SE 60th Street South to City Limits

B. Zoning/Context

The proposed South Bellevue Segment of the transmission line runs through multiple land use districts along PSE's proposed alignment. The percentage of the proposal abutting each district is summarized in Table III-I, and the districts are shown in Figure III-6.

Table III-1. Percentage of Transmission Line Abutting Each Zone

Zone	Percentage of Transmission Line
Single Family Residential	63.7%
Single Family Residential Estate	16.8%
Office and Limited Business 1	7.8%
Light Industrial	7.6%
Office and Limited Business 2	3.1%
Multi-Family Residential	1.0%

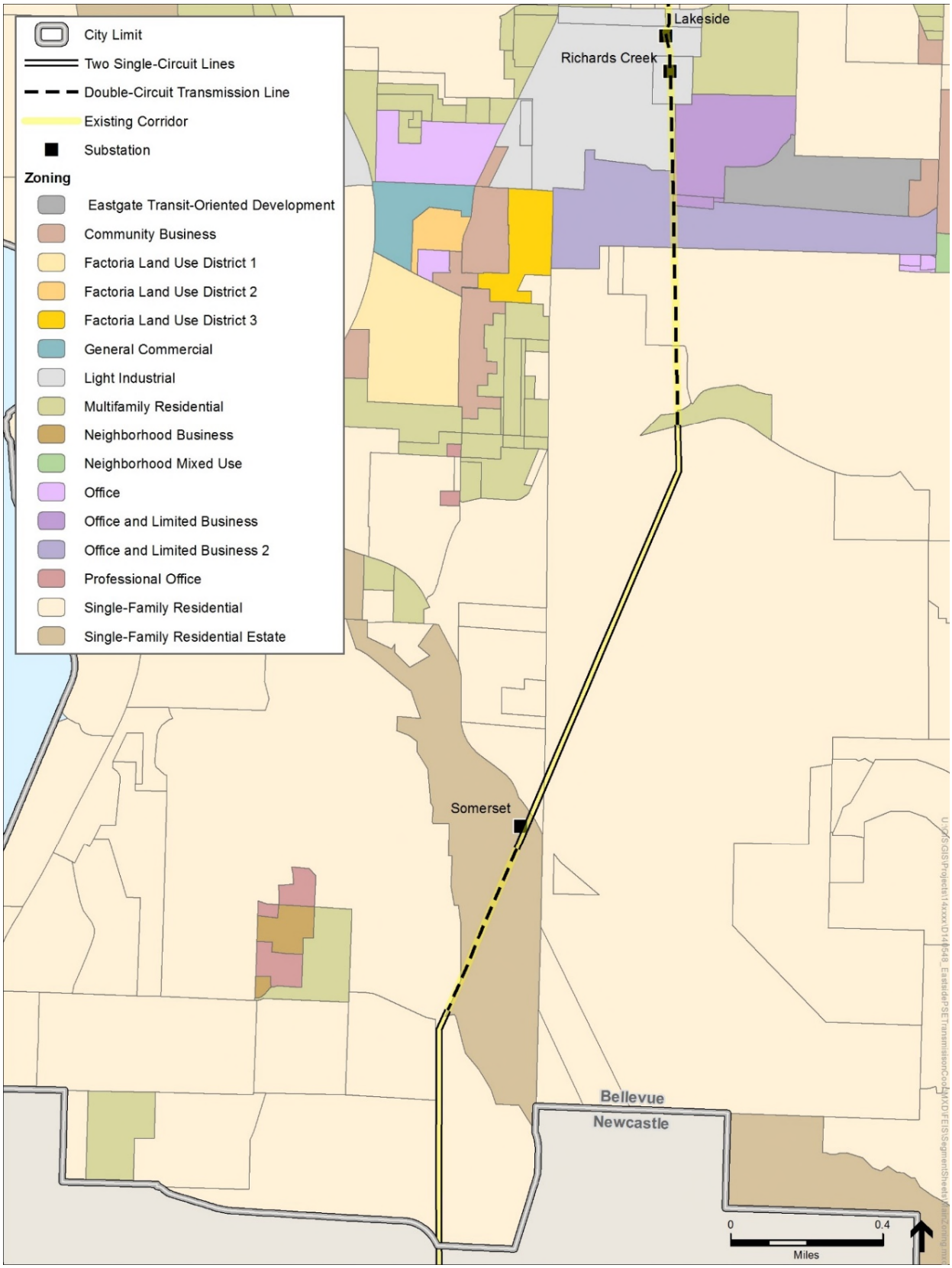

Figure III-6. Zoning Map

C. Critical Areas

This section of the Staff Report describes the critical areas through which PSE's proposed alignment passes. PSE has submitted Critical Area Reports, as required by Part 20.25H LUC, that further detail the existing functions and values of the subject critical areas; the reports are included Attachment I to this Staff Report.

1. Streams and Riparian Areas

Most of the elements necessary for a healthy aquatic environment rely on processes sustained by the dynamic interaction between the stream and the adjacent riparian area (Naiman et al. 1992). Riparian vegetation in floodplains and along stream banks provides a buffer to help mitigate the impacts of urbanization (Finkenbine et al. 2000 in Bolton and Shellberg 2001). Riparian areas support healthy stream conditions.

Riparian vegetation, particularly forested riparian areas, affect water temperature by providing shade to reduce solar exposure and regulate high ambient air temperatures, slowing or preventing increases in water temperature (Brazier and Brown 1973; Corbett and Lynch 1985).

Upland and wetland riparian areas retain sediments, nutrients, pesticides, pathogens, and other pollutants that may be present in runoff, protecting water quality in streams (Ecology 2001; City of Portland 2001). The roots of riparian plants also hold soil and prevent erosion and sedimentation that may affect spawning success or other behaviors, such as feeding.

Both upland and wetland riparian areas reduce the effects of flood flows. Riparian areas and wetlands reduce and desynchronize peak crests and flow rates of floods (Novitzki 1979; Verry and Boelter 1979 in Mitsch and Gosselink 1993). Upland and wetland areas can infiltrate floodflows, which in turn, are released to the stream as baseflow.

Stream riparian areas, or buffers, can be a significant factor in determining the quality of wildlife habitat. For example, buffers comprised of native vegetation with multi- canopy structure, snags, and downed logs provide habitat for the greatest range of wildlife species (McMillan 2000). Vegetated riparian areas also provide a source of large woody debris that helps create and maintain diverse in-stream habitat, as well as create woody debris jams that store sediments and moderate flood velocities.

Sparsely vegetated or vegetated buffers with non-native species may not perform the needed functions of stream buffers. In areas where the buffer is not well vegetated, it is necessary to either increase the buffer width or require that the standard buffer width be restored or revegetated (May 2003). Until the newly planted buffer is established the near term goals for buffer functions may not be attained.

Riparian areas often have shallow groundwater tables, as well as areas where groundwater and surface waters interact. Groundwater flows out of riparian wetlands, seeps, and springs to support stream baseflows. Surface water that

flows into riparian areas during floods or as direct precipitation infiltrates into groundwater in riparian areas and is stored for later discharge to the stream (Ecology 2001; City of Portland 2001).

Project Site Conditions: A total of 11 streams are located along the segment corridor. Streams are generally concentrated near the Richards Creek substation site and Coal Creek Natural Area. Three of the streams are located at the Lakeside substation site, two are at the Richards Creek substation site, and six are along the transmission line corridor. All of these streams are either a Type F or N stream. Stream classifications and buffer widths are summarized in the Critical Areas Report (see Attachment I to this Staff Report). Note that the streams are largely within wetlands or wetland buffers. The wetlands typically have buffer requirements that are equal to or larger than the required stream buffers. As a result, the stream buffers are also almost all contained within the wetlands or wetland buffers on the Richards and Lakeside substation sites.

Figure III-7. Stream Locations

The Critical Areas Report indicates that a tributary to Richards Creek found on the substation site, is used by some cutthroat trout, but habitat in this stream is degraded. The buffer does not provide optimal biofiltration to remove stormwater runoff from existing paved, pollution-generating surfaces draining toward the stream. Areas of dense invasive species along the existing stream channel impede habitat functions. The lack of plant species and structural diversity limits food sources and cover opportunities for most wildlife species. The stream is straight and choked with grass and vines in places. It lacks deep pool habitat with intervening riffles, and there is very little wood for protective cover or to provide scour to form and maintain pools. It has a western exposure due to an adjoining paved industrial supply storage area. As a result, it is exposed to direct afternoon sunlight from the west that tends to increase water temperatures. The stream channel gradient is much steeper upstream of an existing pair of culverts and becomes flatter below, causing sediment to accumulate at the culvert inlet and block flow. Frequent maintenance is needed to unclog the culverts to maintain flow. The channel downstream of the culverts also fills with sediment, causing flows to spill out onto an adjacent, lower paved industrial area.

Stream buffer conditions along the corridor are generally degraded due to the presence of invasive species and active transmission line management, which limits vegetation growth and impacts hydrologic and habitat functions.

2. Wetlands

Wetlands provide important functions and values for both the human and biological environment; these functions include flood control, water quality improvement, and nutrient production. These “functions and values” to both the environment and the citizens of Bellevue depend on their size and location within a basin, as well as their diversity and quality. While Bellevue’s wetlands provide various beneficial functions, not all wetlands perform all functions, nor do they perform all functions equally well (Novitski et al. 1995). However, the combined effect of functional processes of wetlands within basins provides benefits to both natural and human environments. For example, wetlands provide significant stormwater control, even if they are degraded and comprise only a small percentage of area within a basin.

Project Site Conditions: A total of 21 wetlands are located along the corridor. These wetlands are generally concentrated on or near the Richards Creek substation site or the Coal Creek Natural Area. Three of the wetlands are at the Lakeside substation site, six are at the Richards Creek substation site, and four are at the Somerset substation site. The remaining 8 wetlands are along the transmission line corridor (See Attachment I to Staff Report). Wetlands range in type from Category IV <2,500 square feet, unregulated wetlands to a Category II wetland. Generally, the wetlands have experienced past impacts or disturbance from the transmission line construction and maintenance. Many of these wetlands are degraded and consist of Himalayan blackberry and reed canarygrass monocultures. Where wetlands are higher functioning, the plant communities contain native species such as Pacific willow, red alder, salmonberry, giant horsetail, and lady fern.

Due to previous development/disturbance and existing land uses, buffer areas are mostly degraded, consisting of compacted soils and invasive vegetation (predominantly Himalayan blackberry and reed canarygrass).

3. Geologic Hazard Areas

Geologic hazards pose a threat to the health and safety of citizens when commercial, residential, or industrial development is inappropriately sited in areas of significant hazard. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided (Washington Administrative Code [WAC] 365-190-120).

Steep slopes may serve several other functions and possess other values for the City and its residents. Several of Bellevue's remaining large blocks of forest are in steep slope areas, providing habitat for a variety of wildlife species and important linkages between habitat areas in the City. These steep slope areas also act as conduits for groundwater, which drains from hillsides to provide a water source for the City's wetlands and stream systems. Vegetated steep slopes also provide a visual amenity in the City, providing a "green" backdrop for urbanized areas, enhancing property values and buffering urban development.

Project Site Conditions:

The submitted Critical Areas Report contains a geotechnical Report and Memo prepared by Geoengineers dated July 11, 2017 (see Attachment I to this Staff Report). The report characterizes the existing conditions in the project area. The report acknowledges the presence of steep slopes and areas of localized landslide hazards; however, no areas of active slope movement or instability were observed. The existing geology in the project area is characterized as "areas mainly consist of glacial drift, recessional outwash, glacially consolidated till and advance outwash deposits, with the exception of a small area of peat, fill, alluvium and Eocene age sedimentary rocks. Soil types anticipated in the project area include mainly silty gravel, silty sand, and silt." Much of the proposed project area includes areas of slope that were previously modified for either the original transmission line construction or other development activities. These areas are characterized by having little to no significant vegetation and contain cut and fill slopes, and rockeries and retaining walls.

4. Species of Local Importance

Urbanization, the increase in human settlement density and associated intensification of land use, has a profound and lasting effect on the natural environment and wildlife habitat (McKinney 2002, Blair 2004, Marzluff 2005, Munns 2006); is a major cause of native species local extinctions (Czech et al. 2000); and is likely to become the primary cause of extinctions in the coming century (Marzluff et al. 2001). Cities are typically located along rivers, on coastlines, or near large bodies of water. The associated floodplains and riparian systems make up a relatively small percentage of land cover in the western United States, yet they provide habitat for rich wildlife communities (Knopf et al. 1988), which in turn provide a source for urban habitat patches or reserves. Consequently, urban areas can support rich wildlife communities. In fact, species richness peaks for some groups, including songbirds, at an intermediate level of development (Blair 1999,

Marzluff 2005). Protected wild areas alone cannot be depended on to conserve wildlife species. Impacts from catastrophic events, environmental changes, and evolutionary processes (genetic drift, inbreeding, colonization) can be magnified when a taxonomic group or unit is confined to a specific area, and no one area or group of areas is likely to support the biological processes necessary to maintain biodiversity over a range of geographic scales (Shaughnessy and O'Neil 2001). As well, typological approaches to taxonomy or the use of indicators present the risk that evolutionary potential will be lost when depending on reserves for preservation (Rojas 2007). Urban habitat is a vital link in the process of wildlife conservation in the U.S.

Project Site Conditions:

As noted in the Critical Areas Report the project area is urban and mostly developed. The transmission line corridor contains little impervious surfaces and is mostly vegetated. Vegetation in the project area often consists of low-growing grasses, landscape plants, and invasive plant species (e.g., Himalayan blackberry and reed canarygrass) typical of disturbed areas. More valuable habitat in the project area includes forested areas on the Richards Creek substation site and in the Coal Creek ravine. However, existing maintenance activities associated with the transmission lines, established PSE programs and procedures, and the urban landscape setting reduce the likelihood that species of local importance will use the corridor areas for breeding.

Of Bellevue's 23 species of local importance, coho salmon are the only aquatic species known to occur in the project area. River lamprey are also presumed to occur in Coal Creek, although this has not been confirmed. Species that could breed in the project area but are considered unlikely to do so based on site disturbance are pileated woodpecker, green heron, red-tailed hawk, and western toad. Bald eagle, pileated woodpecker, Vaux's swift, purple martin, merlin, green heron, red-tailed hawk, and Townsend's big-eared bat have the potential to forage in the project area. The project area supports suitable habitat for pileated woodpeckers (e.g., green spaces east of the Richards Creek substation site, near Eastgate Park, and Coal Creek Park), green herons (e.g., Coal Creek and Richards Creek), and osprey.

A complete evaluation of habitat associated with species of local importance is provided in the December 2018 Revised South Bellevue Critical Areas Report, prepared by the Watershed Company, at Section 4.3.3 (see Attachment I to this Staff Report).

5. **Areas of Special Flood Hazard**

Floodplains provide both hydrologic and ecological functions. Flooding occurs when either runoff exceeds the capacity of rivers and streams to convey water within their banks, or when engineered stormwater systems are overwhelmed. Urbanization is linked with increased peak discharge and channel degradation (Dunne and Leopold 1978; Booth and Jackson 1997; Konrad 2000). Floodplains diminish the effects of urbanization by temporarily storing water and mediating flow to downstream reaches. The capacity of a floodplain to buffer upstream fluctuations in discharge varies according to valley confinement, gradient, local relief, and flow resistance provided by vegetation. Development within the

floodplain can dramatically affect the storage capacity of a floodplain, impact the hydrologic regime of a basin and present a risk to public health and safety and to property and infrastructure.

Project Site Conditions: Areas of special flood hazard in the project area include relatively small areas associated with Sunset Creek and Coal Creek, as determined by the Federal Emergency Management Agency (FEMA). These floodplains are highly modified and in the case of Sunset Creek contains both structures, roads, and other impervious surfaces.

IV. CONSISTENCY WITH LAND USE CODE AND ZONING REQUIREMENTS

A. Electrical Utility Facilities – LUC 20.20.255

The purpose of LUC 20.20.255 is to regulate proposals for new or expanding electrical utility facilities and to minimize impacts associated with such facilities on surrounding areas through siting, design, screening, and fencing requirements. The Electrical Utilities Facilities provisions of the LUC require an Alternative Siting Analysis (LUC 20.20.255.D), compliance with the applicable decision criteria (LUC 20.20.255.E), and compliance with applicable design standards regarding site landscaping, fencing, and height limitations (LUC 20.20.255.F). In turn, LUC 20.20.255.G provides broad authority for the City to impose conditions relating to the location, development, design, use, or operation of an electrical utility facility in order to mitigate environmental, public safety, or other identifiable impacts.

The Alternative Siting Analysis discussed in LUC 20.20.255.D is required for proposals that impact sensitive sites as identified on Map UT-7 of the Comprehensive Plan (see Attachment F to this Staff Report). In addition, all route alternatives considered by PSE traverse residential land use districts. PSE's proposed alignment, the "Willow 1" alternative, is specifically identified in and anticipated by Map UT-7. Thus, the Alternative Siting Analysis required by LUC 20.20.255.D applies to PSE's proposal.

Section IV.A of this Staff Report analyzes PSE's compliance with the Alternative Siting Analysis and design standards requirements in LUC 20.20.255.D and 20.20.255.F, respectively. Analysis of PSE's compliance with the Electrical Utilities Facilities decision criteria, contained in LUC 20.20.255.E, is provided in **Section VIII.C** (Electrical Utility Facilities Decision Criteria) of this Staff Report.

1. **Compliance with the Alternative Siting Analysis:**
   LUC 20.20.255.D requires that PSE identify alternative sites, provide required content showing analysis relating to identified sites, describe technologies considered for the proposal, and describe community outreach conducted for proposals relating to new or expanding electrical utility facilities on sensitive sites as identified on Map UT-7 of the Comprehensive Plan.

   As part of the subject application, PSE submitted an Alternative Siting Analysis (see Attachment B to this Staff Report) that contained information regarding the methodology employed, the alternative sites analyzed, the technologies considered, and the community outreach undertaken in connection with the proposal (see LUC 20.20.255.D). The Alternative Siting Analysis provided by PSE specifically considers: (1) three siting alternatives for the transmission line upgrades and proposed substation; (2) the relationship of each alternative alignment to the location of the actual demand for electrical service and to improved customer reliability; (3) the City of Bellevue's location selection hierarchy contained in LUC 20.20.255.D.2; and (4) the impacts of PSE's proposed alignment compared to a nonresidential siting.

   The Alternative Siting Analysis submitted by PSE satisfies LUC 20.20.255.D.1 because it specifically describes substation alternatives and three potential transmission line alignments, as analyzed in detail in the report prepared by

Tetra Tech for PSE titled *Eastside 230 kV Project Constraint and Opportunity Study for Linear Site Selection* (Tetra Tech 2013).[20] The Analysis determines that the three potential transmission line alternatives—the Willow 1 (proposed alignment), Willow 2, and Oak 1 routes—are all feasible, but Willow 1 is the alternative that limits environmental impacts and new impacts to adjacent uses. The option of placing the new 230 kV transmission lines underground is also discussed, with a cross reference to the Phase 1 Draft EIS, at Section 2.4.1.3 of the Analysis (see Attachment B to this Staff Report).

The three substation alternatives discussed in the Analysis are referred to as Westminster, Vernell, and Richards Creek. PSE selected these three substation sites for consideration because they are all owned by PSE; meet the objectives to site the 230 kV transformer at a central location between the existing 230 kV power sources at the Sammamish substation in Redmond and Talbot substation in Renton; accommodate the necessary improvements to serve the required 230 kV transmission lines to bring power to the centralized transformer; and distribute power to the existing network of 115 kV transmission lines. Because the Westminster site is farther away from the Lakeside 115 kV station, PSE determined that there was no benefit in using the Westminster site over the Richards Creek substation site. Similarly, the Vernell site, unlike the Richards Creek site, would not allow PSE to use the existing corridor and would require additional transmission lines between the site and the existing transmission line corridor.

The Alternative Siting Analysis submitted by PSE satisfies the requirements of LUC 20.20.255.D.2 because it accurately describes and maps the alternative sites, along with the applicable land use districts within which the sites are located, and analyzes both customer demand and operational need. For example, Appendix C in the Alternative Siting Analysis identifies the specific routes evaluated by PSE, and Section 2.3 of the Analysis summarizes the land use and zoning along each route. PSE also provided a copy of USE 2015 and excerpts from the Quanta Eastside Needs Assessment Report, the Quanta Supplemental Eastside Needs Assessment Report, Exponent 2012, and the Phase 2 Draft EIS to support its analysis of the proposed location and operational need. Each of these reports confirm the operational need identified by PSE.[21]

The Alternative Siting Analysis and the documents attached thereto comply with LUC 20.20.255.D.3 because they describe how the proposal is intended to provide reliability and describe the range of technologies considered (see Attachment B [Alternative Siting Analysis], pp. 18-24). Consistent with LUC 20.20.255.D.3.d, the Analysis provided by PSE describes mitigation measures, including: (1) limiting the proposal to the existing corridor, (2) pole height reduction and location mitigations, (3) compliance with City codes and

[20] Tetra Tech 2013 is attached (as Appendix C) to PSE's Alternative Siting Analysis.

[21] Further discussion of operational need is contained in Section VIII.C of this Staff Report in connection with the Electrical Utility Facilities Decision Criteria, see LUC 20.20.255.E.3.

standards, and (4) the Richards Creek substation wetland mitigation, culvert replacement and stream habitat improvement (described in more detail below).

The Analysis also explains that PSE's preferred alignment for the transmission line upgrades, the Willow 1 route, minimizes compatibility impacts because it does not require acquisition of additional easements; it removes the fewest number of trees; and it prioritizes safety by having the lowest potential AC interaction with the two petroleum pipelines that share the corridor. PSE has sought to mitigate impacts by reducing pole height and moving pole locations, where feasible and requested by a stakeholder, and through consideration of different pole colors to limit contrast with the skyline or adjacent uses. PSE will mitigate vegetation impacts by replanting both on and off-site consistent with a tree replacement plan (see Sections VI.A and X of this Staff Report for further discussion of tree replacement mitigation and the process for implementing the tree replacement plan).

With respect to the community outreach description required by LUC 20.20.255.D.4, the Alternative Siting Analysis describes how PSE began working with Bellevue residents and City staff several years prior to submittal of the CUP and CALUP applications to determine the best possible route for the proposed transmission lines. The CAG that participated in the outreach included 24 representatives from various interest groups across the Eastside, including neighborhood organizations, cities, schools, social service organizations, major commercial users, economic development groups, an environmental organization, and a property developer. The CAG met eight times between January 22 and December 10, 2014, and PSE attached the CAG Final Report to the Alternative Siting Analysis (see Appendix D to the Alternative Siting Analysis).

The CAG process was supplemented by a broad community outreach effort, which included three public open houses, six sub-area workshops, three sub-area committee meetings, and two question-and-answer meetings. The public submitted questions and comments via email, voicemail, and an online public comment form, resulting in approximately 2,300 comments and questions. A variety of options for the Energize Eastside project, both wire and non-wire, were evaluated as part of the CAG process. As a result of the process, and consistent with LUC 20.20.255.D, the Oak and Willow transmission line options were considered feasible and selected for further consideration as alternative alignments for the Project.

The programmatic EIS (the Phase 1 Draft EIS) was prepared to assess various wire and non-wire solutions, and a project-level EIS (the Phase 2 Draft EIS) was prepared to evaluate four alternative alignments between the proposed Richards Creek substation and the southern city limits of Bellevue, referred to in the EIS as the Willow 1, Willow 2, Oak 1, and Oak 2 Options. Consistent with SEPA, scoping meetings and a public comment period were held prior to development of both the programmatic and project-level Draft EISs, and public hearings and public comment periods were held following the release of each Draft EIS.

Ultimately, PSE selected the Willow 1 Option as its proposed alignment based on the public outreach and technical review that occurred during the CAG and EIS processes. All of the option routes, including Willow 1, traverse residential land use districts, but PSE determined that utilizing the existing corridor would minimize impacts associated with the Project on surrounding areas. As discussed above, PSE's decision to use the existing corridor minimizes tree removal as compared to establishing a new corridor and allows for better assessment of potential interactions with the co-located petroleum and natural gas pipeline (see DNV GL 2016). The existing corridor also minimizes the creation of new impacts to adjacent uses, including residential uses. As properties adjacent to the transmission line corridor currently have utility facilities in their viewsheds and neighborhoods, the Willow 1 route has lower impacts compared to establishing a new corridor.

The Alternative Siting Analysis (Attachment B to this Staff Report) contains sufficient information regarding the methodology employed, the alternative sites analyzed, the technologies considered, and the community outreach undertaken to satisfy the requirements of LUC 20.20.255.D. The Analysis includes numerous appendices addressing Project need, public outreach and input, and tracks the extensive environmental review undertaken in connection with the Project. The Analysis also explains how, by constructing the proposed transmission line facilities in the existing 115 kV transmission line corridor and selecting the Richards Creek substation, site compatibility impacts are limited by this preferred alternative. See LUC 20.20.255.D.2.d. Therefore, PSE's Alternative Siting Analysis complies with the provisions of LUC 20.20.255.D.

2. Compliance with LUC 20.20.255.F Design Standards:

a. <u>Site Landscaping (LUC 20.20.255.F.1)</u>:
Richards Creek Substation: At the Richards Creek substation site, LUC 20.20.520.F.2 requires 15 feet of Type I landscaping on all sides of the substation and additional requirements for portions of the site within critical areas. The substation site contains wetland and stream critical areas on the north, south, and western portions of the site.

As part of the CUP application, PSE submitted a Landscape Plan proposing that the required landscape screen approximately 30 feet in width along the east side of the substation with a combination of replacement trees and existing understory vegetation (see Attachment A to this Staff Report). The screen will be elevated above the proposed substation supported by a retaining wall and will screen the substation from undeveloped property that is forested and contains a stormwater detention facility that serves multi-family development farther east across 139th Ave SE.

LUC 20.20.520.F.6 states that if a proposal is located within a Critical Area Overlay District, the Director shall waive the planting requirement of F.2 and require the use of native vegetation within the critical area or critical area buffer in lieu of landscape development if the width of the existing vegetation is at least twice that as required under F.2. PSE's proposal includes an area on the north, south, and west sides that contains critical areas and is at least

twice the required 15-foot landscaping buffer. Plantings will be required to mitigate impacts to wetlands and stream buffers. These plantings will be located around the perimeter of the parcel, which will also enhance the function of the perimeter screening. With the mitigation plantings, this standard will be achieved. Rather than simply hydroseeding areas of disturbance, PSE shall plant groundcover or low growing shrubs in addition to the proposed trees in any areas outside of the required critical areas plantings surrounding the substation.

Lakeside Substation: The proposed work does not trigger additional site landscaping at this location.

Transmission Lines: N/A.

The final site and landscape plans for the substation are attached hereto (see Attachment A). **In addition, refer to the Conditions of Approval regarding site landscaping in Section X of this Staff Report.**

b. Fencing (LUC 20.20.255.F.2):

Richards Creek Substation: Substations are required to have sight-obscuring fencing not less than 8 feet in height. This requirement may be modified by the City if the site is not considered sensitive as referenced in Map UT-7 of the Comprehensive Plan, is adequately screened by topography and/or existing or added vegetation, or if the facility is fully enclosed within a structure. To the maximum extent possible, all electrical utility facility components, excluding transmission lines, shall be screened by either a site-obscuring fence or alternative screening.

The Richards Creek substation site is sufficiently screened by critical area vegetation (existing and proposed enhancement); and based on the site topography, its location at the end of a public street, and the proposed location of the substation footprint setback in the hill to the east, it is unlikely that the substation will be noticeably visible from outside the substation property. Therefore, the City concludes that a sight-obscuring fence is not required due to these circumstances.

Lakeside Substation: The site is currently fenced.

Transmission Line: N/A.

The final site and landscape plans for the substation are attached hereto (see Attachment A). **In addition, refer to the Conditions of Approval regarding site landscaping in Section X of this Staff Report.**

c. Required Setbacks (LUC 20.20.255.F.3):

The required structure setbacks for the Light Industrial zoning district are shown in Table IV-1:

Table IV-1. Required Setbacks

	Required	Proposed
Front (West)	15 feet	280 feet
Rear (East)	15 feet *	63 feet
Side	15 feet *	168 feet / 87 feet

*Rear and side yards are governed by the required landscaping standards per LUC 20.20.010 Footnote (2). The required landscaping for interior property lines in the LI Land Use District is 8 feet of Type III landscaping. However, as noted above, electrical utility facilities are required to provide 15 feet of Type I landscaping on all sides. Therefore, the effective setback requirement for side and rear yards for the Richards Creek substation is 15 feet.

The Richards Creek substation proposal conforms to the setback requirements.

d. Height Limitations (LUC 20.20.255.F.4):
The maximum structure height varies by land use district along the transmission line corridor. The tallest maximum height allowed along PSE's proposed alignment is 75 feet. The maximum heights listed in the code for each zone are shown in Table IV-2, along with the maximum height proposed in each zone.

Table IV-2. Maximum Height per Land Use Code and Proposed Project

Zone	Maximum Height per Land Use Code	Maximum Height Proposed
S.F. Residential (R-3.5, R-5)	35 feet	95 feet
S.F. Residential Estate (R-1)	35 feet	109 feet
Office and Limited Business (OLB)	45 feet	90 feet
Office and Limited Business 2 (OLB 2)	75 feet	85 feet
Light Industrial (LI)	45 feet	100 feet
Multi-Family Residential (R-10, R-15)	30 feet	90 feet

Under LUC 20.20.255.F.4, PSE may exceed the height of the underlying land use district provided that:

1) The requested increase for the poles is the minimum necessary for the effective functioning of the electrical utility facility; and
2) Impacts associated with the electrical utility facility have been mitigated to the greatest extent technically feasible. (LUC 20.20.255.F.4).

Finding: The heights proposed are the minimum heights possible given the constraints of a 230 kV system following the existing pole spacing in the corridor. PSE has explained that further modifications to necessary pole heights would increase the number of poles, result in increased tree removal to

accommodate the additional poles, and provide fewer screening options for both the existing and new pole locations within the corridor.[22]

In addition, PSE has provided information suggesting that electrical and magnetic fields (EMF) levels and the potential for interaction with the co-located Olympic pipeline system would increase with any reduction in pole height, or with the addition of significantly more poles (PSE 9-21-18). The proposal is located within the existing corridor long recognized in the City of Bellevue Comprehensive Plan as geographic location for the Project, and PSE has explained why the heights proposed are the minimum necessary for the effective functioning of the proposal. Therefore, PSE has established that the proposal is complies with LUC 20.20.255.F.4.a.

The Final EIS assessed potential impacts associated with the Energize Eastside project, including an assessment of PSE's project-level proposed alignment (Willow 1) and environmental impacts of the entire Project in light of this proposed alignment (see Chapters 1, 2, 4, 7, and 8 of the Final EIS). The Final EIS analyzed both cumulative impacts of the Project across all jurisdictions and specific impacts within the South Bellevue Segment.

As the analysis in the Final EIS confirmed, any impacts in the existing corridor resulting from increased pole heights in the South Bellevue Segment will be less than significant, with the exception of an 0.8 mile area where the transmission lines traverse a portion of the Somerset neighborhood. Section VI.C and Section VIII of this Staff Report discuss the significant, unavoidable adverse impacts to aesthetics and scenic views in the Somerset neighborhood as identified by the Final EIS. The discussion contained in Sections VI.C and VIII explain how and why the significant unavoidable adverse aesthetic impacts in Somerset have been mitigated to the greatest extent technically feasible. Moreover, the Conditions of Approval contained in Section X of this Staff Report mitigate identified environmental, aesthetic, and public safety impacts associated with PSE's proposal to the greatest extent technically feasible, consistent with LUC 20.20.255.F.4.b.

B. Critical Areas Requirements – LUC 20.25H

The City of Bellevue Land Use Code Critical Areas Overlay District (LUC 20.25H) establishes standards and procedures that apply to development on any site that contains in whole or in part any portion designated as critical area or critical area buffer. Regulated critical areas within the project area include wetlands, streams, geologic hazard areas, and flood hazard areas.

Per LUC 20.25H.055.B, a new or expanded utility system (including an electrical utility facility per LUC 20.50.050 and .018) is an allowed use within a critical area. Permanent impacts, vegetation conversion, and temporary impacts are expected to

[22] Letter from Brad Strauch, PSE Program Manager, to Heidi Bedwell, City of Bellevue Environmental Planning Manager, dated September 21, 2018. PSE's September 21, 2018 letter (PSE 9-21-18) is included in the Critical Areas Report, which is Attachment I to this Staff Report. PSE 9-21-18 is also included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

occur in wetlands, geological hazard areas, and buffer and structure setbacks associated with streams, wetlands, and geologic hazards.

1. **Consistency with LUC 20.25H.055.C.2 – New and Expanded Uses or Development**

   a. New or expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically alternatives will consider:

   i. The location of existing infrastructure;
   ii. The function or objective of the proposed new or expanded facility or system;
   iii. Demonstration that no alternative location or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside of the critical area;
   iv. Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and
   v. The ability of both permanent and temporary disturbance to be mitigated.

   Finding: The proposed route is within an existing corridor with 115 kV transmission lines and is adjacent to an existing substation and required connections to other PSE transmission lines. These lines are supported by H-frame poles, which are grouped in sets of two or three and are approximately 2 to 3 feet in diameter. For the most part existing access routes are proposed for construction and maintenance of the proposed Project.

   The objective of PSE's proposal is to increase the capacity of the Eastside electric grid to keep pace with projected increases in electricity demands during peak periods and ensure reliability of the system. As described in the Final EIS, PSE established broad objectives for the Project:

   - Address PSE's identified deficiency in transmission capacity.
   - Find a solution that can be feasibly implemented before system reliability is impaired.
   - Be of reasonable Project cost.
   - Meet federal, state, and local regulatory requirements.
   - Address PSE's electrical and non-electrical criteria for the Project.

   PSE concluded that the most effective and cost-efficient solution to meets its objectives is to site a new 230 kV transformer in the center of the Eastside, which would be fed by new 230 kV transmission lines from the north and south (see Stantec 2015).

   Three substation locations were considered (i.e., the Westminster, Vernell, and Richards Creek sites), and all were evaluated as part of the CAG process. The

sites were selected for consideration because they are all owned by PSE; meet the objectives to site the 230 kV transformer at a central location between the existing 230 kV power sources at Sammamish substation in Redmond and Talbot substation in Renton; accommodate the necessary improvements to serve the required 230 kV transmission lines to bring power to the centralized transformer; and distribute power to the existing network of 115 kV transmission lines.

The Richards Creek and Westminster sites are located along the existing corridor; however, the Vernell site would require a new 230 kV transmission line to follow a different corridor between the existing Sammamish substation in Redmond and the Lakeside substation in Bellevue as well as the installation of additional 115 kV lines to the existing Clyde Hill and Ardmore substations. Both the Westminster substation site and Richards Creek site would include impacts to wetlands, streams, and vegetation; however, the Westminster site is undeveloped and forested, likely resulting in more tree and vegetation removal than the Richards Creek site. It is anticipated that the entire wetland at Westminster would be affected by substation construction. This would result in greater wetland impacts than at Richards Creek. Also due to the small size of the Westminster site, the same opportunity for wetland mitigation would not be able to occur in the location of the impacts. The Vernell substation does not contain wetlands but has a small stream and contains the more extensive geologic hazard areas.

The Richards Creek substation site was selected because it is adjacent to the Lakeside substation, existing infrastructure, and required connections to other PSE transmission lines. In addition, a portion of it is currently used as a pole storage yard that includes a flat storage area consisting of paved driveways and gravel, which makes development of the site easier and results in disturbance to already impacted and degraded areas.

Several transmission corridor alternatives were also evaluated as part of the CAG process. Four corridor options were evaluated for the segment south of the Richards Creek substation site in the Phase 2 Draft EIS (the Oak 1, Oak 2, Willow 1, and Willow 2 Options). None of these routes would completely avoid critical area impacts. It was determined that siting the proposed route within the existing 115 kV corridor will result in the fewest impacts to critical areas and critical area buffers.

Total avoidance of critical areas is not feasible. Complete avoidance of wetlands is not possible in this area due to the fixed location of the substation site and the transmission line corridor. Existing access routes will be used to the extent feasible. Use of the existing corridor and locating the new poles generally close to the existing poles allows the use of existing access points in many instances without creating additional critical area impacts.

Alternative locations for substation and corridors would require relocation of existing infrastructure and creation of new infrastructure in locations not previously developed. Use of the existing, already developed and maintained corridor helps to reduce costs of the proposed Project and minimizes environmental impacts.

The proposal includes mitigation for temporary and permanent impacts. Areas that are temporarily disturbed will be restored in place, and permanent disturbance,

which in most cases involves conversion of vegetation from one plant community to another, will also be mitigated. Wetland and buffer impacts are able to be mitigated through wetland enhancement on existing substation sites. Refer to discussion below regarding wetland mitigation.

b. If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the following:

i. Location and design shall result in the least impacts on the critical area or critical area buffer.

Finding: The proposed project will result in impacts to Category II, Category III, and Category IV wetlands. The vast majority of project impacts occur in the Richards Creek sub-basin and, more specifically, at or immediately adjacent to the proposed Richards Creek substation site. Impacts in the transmission line corridor (from new pole footprints) are also offset by the removal of existing poles. Two poles contributing 12 square feet (SF) of fill will be removed from Wetland A (Richards Creek); one pole contributing 6 SF of fill will be removed from the buffer of Wetland A (Richards Creek) near the Lakeside substation. Plans included in the Critical Areas Report identify where poles are being replaced and how much fill will be required under each construction method/pole location.

The following tables summarize wetland impacts:

Table IV-3. Summary of Wetland Impacts

	Category II Wetland Impacts	Area of Net Impact (SF)	Source of Impact
Richards Creek Sub-basin	Permanent	41	Development of Richards Creek Substation in Wetland D (Richards)
	Conversion	100	Legal ROW in Wetland D (Richards)
	Temporary	731	Clearing limits of Richards Creek Substation in Wetland D (Richards)

	Category III Wetland Impacts	Area of Net Impact (SF)	Source of Impact
Richards Creek Sub-basin	Permanent	2,534	Development of Richards Creek Substation in Wetlands A and B (Richards) and pole footprints in Wetlands A and H (Richards)
	Conversion	10,018	Legal ROW, managed ROW, wire zone, pole work area, access route, and/or pole buffer in the following Wetlands: A (Richards)and H (Richards)
	Temporary	8,252	Clearing limits of Richards Creek Substation, pole work area, pole buffer, and/or access route in Wetland A (Richards) and Wetland H (Richards)

	Category III Wetland Impacts	Area of Net Impact (SF)	Source of Impact
Coal Creek Sub-basin	Permanent	0	None
	Conversion	1,145	Wire zone and managed ROW in Wetland MB01
	Temporary	0	None

	Category IV Wetland Impacts	Area of Net Impact (SF)	Source of Impact
Coal Creek Sub-basin	Permanent	0	None
	Conversion	0	None
	Temporary	1,155	Pole buffer in Wetland A (Somerset); pole work area in Wetland D (Somerset)

Buffer impacts are generally on the Lakeside or Richards Creek substation site as a result of the substation construction. The remaining impacts are within the transmission line corridor and are because of vegetation management activities. Due to previous development/disturbance and existing land uses, buffer areas are mostly degraded, consisting of compact soils and invasive vegetation (predominantly Himalayan blackberry and reed canarygrass). However, some significant trees are present within the buffers. The health of the trees is mixed and in some cases degraded due to past pruning and vegetation management activities.

Table IV-4. Summary of Buffer Impacts

	Wetland and Stream Buffer Impacts	Area of Net Impact (SF)	Source of Impact
Richards Creek Sub-basin	Permanent	23,893	Development of Richards Creek Substation and pole footprint
	Conversion	22,885	Richards Creek Substation limit of vegetation management, Richards Creek Substation clearing limits, legal ROW, managed ROW, pole buffer, pole work area, access route, and wire zone
	Temporary	35,362	Richards Creek Substation clearing limits, pole buffer, pole work area, and access route
Coal Creek Sub-basin	Permanent	35	Pole footprint
	Conversion	7,734	Legal ROW, managed ROW, and wire zone.
	Temporary	5,407	Access route, pole buffer, and pole work area

No permanent or temporary impacts are proposed in geologic hazard areas. According to the Critical Areas Report, impacts to landslide hazard areas and steep slopes result from vegetation management and total 5,031 SF and 4,447 SF, respectively. Proposed buffer impacts result from access routes, pole buffer, pole work area, and vegetation management. One new pole is proposed in geologic hazard area buffers to replace five existing poles to be removed resulting in an overall decrease in fill in this critical area type.

As part of the proposed Project, two existing H-frame structures (which include a total of four poles) will be removed from a flood hazard area associated with Sunset Creek and replaced with two new poles. The existing H-frame poles are in a highly developed area with medium to high density residential development and paved roads and parking areas. Existing pole footprints are approximately 6 SF each, totaling approximately 24 SF of area.

Table IV-5. Summary of Floodplain Impacts

	Floodplain Impacts	Area of Net Impact (SF)	Source of Impact
Zone AE (Sunset Creek)	Permanent	32	Pole footprints in floodplain associated with Sunset Creek
	Conversion	4,508	Pole buffer, pole work area, access route, legal ROW, managed ROW, and wire zone in Sunset Creek floodplain
	Temporary	1,679	Access route, pole buffer, and pole work area
Zone A (Coal Creek)	Permanent	0	None
	Conversion	2,777	Legal ROW, managed ROW, and wire zone in Coal Creek floodplain.
	Temporary	0	None

Permanent impacts to critical areas are minimized and impacts are generally limited to vegetation conversion. Pole locations are designed to be in the vicinity of existing poles rather than in areas where critical areas have not been impacted in the past by poles. Where the existing poles are within a critical area, the new design moves the poles outside of the critical area and buffer to the degree feasible.

ii. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized.

Finding: Critical area and critical area buffer disturbances will be minimized through design practices and engineering controls. Best Management Practices (BMPs) will be used to minimize ground disturbance during construction, including during the use of existing, vegetated access routes. Poles that create disturbance of critical areas or critical area buffers will generally be accessed using existing, partially vegetated access (established during the original construction and re-used over time to maintain the corridor). Post construction, disturbed areas shall be restored.

Any equipment or vehicles will be staged and refueled outside of critical areas and critical area buffers. Containment measures will be included in the project-specific Construction Stormwater Pollution Prevention Plan (CSWPPP).

Tree removal activities will be performed in a manner to minimize impacts to underlying shrubs, groundcover, and other trees, without disturbance to soil. BMPs will be used to minimize ground disturbance in these areas and in areas of new access. Any permanent impacts to vegetation within a critical area or critical area buffer shall include replacement planting area. Restoration of temporary impacts

shall be with native plants where native plants are being removed. All other areas of temporary impact shall be re-vegetated except for those areas which contained impervious surfaces prior to construction activities. The final mitigation plan for permanent impacts and vegetation conversion in critical areas and critical areas buffers shall be developed consistent with the City's Critical Areas Handbook for species choice, plant size, and spacing. Trees within a critical area or critical area buffer shall be replaced at a minimum of a 3:1 ratio. All other areas of vegetation removal shall be mitigated in an equivalent area consistent with the replacement ratios contained in Attachment I (Critical Areas Report) to this Staff Report.

In critical areas or buffers, mats will be placed over existing vegetation where possible. When installing the new conductors, techniques will be used to avoid impacts to critical areas (i.e., shooting the wire from pole to pole or using guide wires). Stringing sites will be outside of critical areas where possible.

An Erosion Control Plan will be required to address construction staging and access. Areas disturbed for temporary access and staging will be restored in place following completion of construction activities. Only native seed mixes and/or native plantings shall be installed in critical areas or critical area buffers. **Refer to the Conditions of Approval regarding final mitigation plan and monitoring, construction staging and access, erosion control, and construction stormwater pollution prevention plans in Section X of this Staff Report.**

iii. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists.

Finding: As described above, no other technically feasible location exists. The proposal minimizes disturbance to critical areas. No in-water work in Coal Creek or Sunset Creeks will occur. BMPs will be implemented to minimize the potential for sediment-laden runoff.

Construction associated with the proposed culvert replacement and stream realignment at the Richards Creek substation site will result in temporary disturbance to the stream. The only instream work is associated with the stream habitat improvement project on the Richards Creek substation site. Habitat improvements will result in net habitat benefits following Project implementation. In addition to reducing flooding, increasing streamflow conveyance capacity, and improving sediment transport and removal, the proposed culvert replacement and stream realignment will improve fish passage and in-stream and riparian habitat conditions. During construction, any fish isolated in the localized instream work area will be removed by the Project-specific fish biologist in the work area. Given the size and characteristics of the existing stream, it is expected that stranded fish can be located and captured using dipnets or small seines followed by electrofishing. Efforts to capture and relocate fish by netting methods will precede electrofishing. Captured fish will be released in unaffected reaches downstream of the project area. The applicant shall be required to receive state and federal permit approval for the proposed work and shall comply with approved in-water work windows as determined by these agencies. A copy of these approvals shall be

submitted to the City of Bellevue before any work associated with the stream occurs.

The December 2018 Revised South Bellevue Critical Areas Report, prepared by the Watershed Company, at Page 18, Section 4.3.3 (see Attachment I to this Staff Report), provides the following information about species of local importance in the project area:

> "Species that could breed in the project area but are considered unlikely to do so based on site disturbance are pileated woodpecker, green heron, red-tailed hawk, and western toad. Bald eagle, pileated woodpecker, Vaux's swift, purple martin, merlin, green heron, red-tailed hawk, and Townsend's big-eared bat also have the potential to forage in the project area."

PSE implements an Avian Protection Plan to protect avian wildlife from harmful interactions with its utility equipment.[23] The Plan includes preventing the creation of potentially harmful nests and monitoring known nest sites when construction activities occur in close proximity during the nesting season. Potential Project impacts to birds are mitigated through PSE's bird protection programs and procedures. Because the project area contains suitable habitat for pileated woodpecker, PSE shall also include the creation of wildlife snags as part of any mitigation plans. Final design shall also include wildlife snags designed as recommended from the State of WA Department of Fish and Wildlife where feasible and in consideration of PSE's Avian Protection Plan. Timing and location of construction work shall consider critical time periods such as the nesting season for species of local importance present in the South Bellevue Segment project area. A habitat biologist or other qualified professional shall submit a plan documenting recommended measures to limit impacts.

Refer to the Conditions of Approval regarding additional state and federal permitting, Stormwater and Erosion Control, and implementation of the Avian Protection Plan in Section X of this Staff Report.

iv. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance.

Finding: No new permanent wetland or stream crossings are proposed.

The proposal includes culvert replacement associated with a small, perennial stream beneath the access driveway to the Richards Creek substation site. In addition to the new culvert crossing, the Project will restore and/or enhance adjoining habitat areas. This includes realigning and enhancing the stream sections extending upstream and downstream of the crossing and enhancing the new stream buffer including associated wetland areas.

[23] PSE Avian Protection Plan is included in Attachment I to this Staff Report (Critical Areas Report).

v. All work shall be consistent with applicable City of Bellevue codes and standards.

Finding: PSE's proposal will comply with applicable City of Bellevue codes and standards. **Refer to the Conditions of Approval in Section X of this Staff Report.**

vi. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod.

Finding: The proposed stream habitat improvement project at the Richards Creek substation site will improve hydrologic functions. It is designed to increase streamflow conveyance capacity, improve sediment transport, facilitate sediment removal from the system, and reduce flooding that now occurs on the adjoining property to the west.

Alterations within the floodplain are limited to vegetation removal and pole installation (replacement of two existing H-frame structures which includes 4 poles, with two new poles). These actions will not have significant adverse impacts on overall aquatic area peak flows, duration or volume or flood storage capacity, or hydroperiod because the poles will result in less fill in the floodplain and not expected to diminish the flood storage capacity of the floodplain.

vii. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists.

Finding: Pole footprints, portions of the Richards Creek substation including the culvert replacement at the entry road, and the access driveway are the only elements of PSE's proposal that must be located within critical areas or buffers. As discussed above, no other feasible alternative exists for these project elements.

viii. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

Finding: A mitigation plan has been provided as part of the subject application. The Final Mitigation Plan shall include the requirements of LUC 20.25H.210, including mitigation goals, performance standards, monitoring and maintenance protocols, and contingencies for the duration of the monitoring period. The Final Mitigation Plan shall depict tree and other vegetation to be removed within all critical area or critical area buffers. Trees within a critical area or critical area buffer shall be replaced at a minimum of a 3:1 ratio. All other areas of vegetation removal shall be mitigated in an equivalent area consistent with the replacement ratios contained in Attachment I (Critical Areas Report). Final design shall also include wildlife snags designed as recommended from the State of WA Department of Fish and Wildlife where feasible and in consideration of PSE's Avian Protection Plan. The mitigation plan shall include BMPs for construction sequencing, monitoring,

and maintenance and shall be developed consistent with the City's Critical Areas Handbook for species choice, plant size, and spacing.

Mitigation plans include wetland enhancement activities proposed on the Richards Creek and Somerset substations. These plans are included in Appendix A of the December 2018 Revised South Bellevue Critical Areas Report, prepared by the Watershed Company (see Attachment I to this Staff Report). **Refer to the Conditions of Approval regarding final mitigation and monitoring plans in Section X of this Staff Report.**

2. Consistency with Applicable Performance Standards:

LUC 20.25H.080.A & B – Performance Standards, General (streams) and Modification of Stream Channel
LUC 20.25H.100 –Performance Standards (wetlands)
LUC 20.25H.105 Mitigation and Monitoring- Additional Provisions (wetlands)
LUC 20.25H.125– Performance standards-Landslide Hazards and Steep Slopes

Consistency with LUC 20.25H.080.A – Performance Standards, General (Streams)

Development on sites with a Type S or F stream or associated critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

1. Lights shall be directed away from the stream.

Finding: New lighting is only proposed at the substation site. It will be contained within the fenced, developed area, and will be directed away from the stream restoration area. The use of shields or other methods will be employed to reduce spillover into critical areas. **Refer to the Conditions of Approval regarding lighting in Section X of this Staff Report.**

2. **Activity that generates noise such as parking lots, generators, and residential uses shall be located away from the stream or any noise shall be minimized through use of design and insulation techniques.**

Finding: Noise generated from the Project after construction is expected to be minimal and limited mainly to the substation. Transformers and their cooling fans generate noise as could any ancillary equipment such as air handling equipment or backup generator testing. All equipment will be located within an enclosed area mainly upslope and away from on-site critical areas. PSE has established noise standards for transformers (upon initial installation) of 70 and 65 A-weighted decibels (dBA) at 1 meter with and without cooling, respectively. This noise level could be audible at adjacent critical areas, depending on their distance and the existing ambient noise level. Site plans also include noise attenuation measures to maintain noise levels at the nearest sensitive receptors within 5 dBA of existing ambient noise levels, which will ensure that impacts to critical areas are minor and will not harm habitat near the substation. Transmission lines within the corridor will generate noise similar to existing conditions. While the transmission line will cross

some critical areas, there will be no substantial additional noise impact on critical areas.

Construction noise is regulated per the City Noise Control Code – Bellevue City Code (BCC) 9.18. **Refer to the Conditions of Approval regarding Noise in Section X of this Staff Report.**

3. **Toxic runoff from new impervious area shall be routed away from the stream.**

Finding: New impervious area is limited to the Richards Creek substation site. The Critical Areas Report notes new transformers will be constructed on top of and within an engineered pad lined with a berm to contain potential releases, referred to as an SPCC curb. The engineered pad beneath the transformers will be lined with a bentonite layer at an appropriate depth that (with the aid of the berm/SPCC curb that surrounds the transformer pad) will collect and hold unanticipated releases, preventing off-site migration to sensitive areas. With these measures in place it is expected that toxic runoff will be prevented from entering the stream.

Additionally, a stormwater vault will be located adjacent to the substation that will discharge into flow dispersion riprap before entering into the stream. The City's Utilities Department has approved the preliminary designs; however, they will review final draft designs to determine if an enhanced water quality facility will be required because the run off for this site flows to fish bearing stream. All design review, plan approval, and field inspection shall be performed under the individual permits and/or Utility Developer Extension Agreements depending on the extent of the work. **Refer to the Conditions of Approval regarding Stormwater in Section X of this Staff Report.**

4. **Treated water may be allowed to enter the stream critical area buffer.**

Finding: As noted above, a new stormwater vault will be located adjacent to the substation that will discharge into flow dispersion riprap in the stream and wetland buffer before entering into the stream.

5. **The outer edge of the stream critical area buffer shall be planted with dense vegetation to limit pet or human use. Preference shall be given to native species.**

Finding: Buffer area and enhancement planting associated with realigning Stream C will create a dense, functional buffer more protective of the stream than the existing condition. The Mitigation Plan includes dense, native plantings in the stream and wetland buffers. **Refer to the Conditions of Approval regarding final mitigation and monitoring plans in Section X of this Staff Report.**

6. **Use of pesticides, insecticides, and fertilizers within 150 feet of the edge of the stream critical area buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.**

Finding: The Critical Areas Report notes that weed control efforts in stream buffers will generally employ manual removal. Plans also call for the use of aquatic certified glyphosate to be used in reed canary infested areas. Any additional pesticide, insecticide, and fertilizer use shall be done in accordance with the City of Bellevue's "Environmental Best Practices" Parks Department Manual. **Refer to the Conditions of Approval regarding BMPs in Section X of this Staff Report.**

Consistency with LUC 20.25H.080.B – Modification of Stream Channel

1. When Allowed. A stream channel shall not be modified by relocating the open channel, or by closing the channel through pipes or culverts unless in connection with the following uses allowed under LUC 20.25H.055:
a. A new or expanded utility facility or system;
b. A new or expanded essential public facility;
c. Public flood control measures;
d. In-stream structures;
e. New or expanded public right-of-way, private roads, access easements or driveways;
f. Habitat improvement project; or
g. Reasonable use exception; provided, that a modification may be allowed under this section for a reasonable use exception only where the applicant demonstrates that no other alternative exists to achieve the allowed development. A critical areas report may not be used to modify the uses set forth in this subsection B.1.

Finding: Stream channel modification is proposed on the Richards Creek substation site in conjunction with the culvert replacement work and to enhance fish and wildlife habitat on-site, increase streamflow conveyance capacity, improve sediment transport, facilitate sediment removal from the system, and reduce flooding that now occurs on the adjoining property to the west. As the channel is stabilized and sediment transport is managed, the stream will improve fish passage and instream habitat. Additional riparian plantings will increase plant and structural diversity for birds and small mammals as well as aquatic species. As a habitat improvement project related to development of a utility facility, it meets the definition of an allowed use under LUC 20.25H.055.

2. Critical Areas Report Required. Any proposal to modify a stream channel under this section may be approved only through a critical areas report.

Finding: PSE proposes a stream channel modification, which includes a culvert replacement. PSE submitted a Critical Areas Report titled South Bellevue Critical Areas Report, Puget Sound Energy – Energize Eastside Project, dated August 2017 and revised December 2018 (see Attachment I to this Staff Report for complete Critical Areas Report) that satisfies this requirement. Specifically, the report details how the stream channel modifications will improve stream, stream buffer, and associated wetland functions and values.

In addition, PSE shall submit a Final Stream Habitat Improvement Plan consistent with the plans submitted as part of this application in Attachment I (Critical Areas Report). The Plan shall be submitted as part of the required clearing and grading permit. All plant species, size, and spacing shall be consistent with the standard found in the City's Critical Areas Handbook. Plan shall include methods for fish exclusion, construction sequencing, monitoring and maintenance. **For more information, refer to the Conditions of Approval regarding Final Stream Habitat Improvement Plan in Section X of this Staff Report.**

Consistency with LUC 20.25H.100 –Performance Standards (wetlands)

i. Lights shall be directed away from the wetland.

Finding: New lighting is only proposed at the substation site. It will be contained within the fenced, developed area, and will be directed away from the wetland area. **Refer to the Conditions of Approval regarding lighting in Section X of this Staff Report.**

ii. Activity that generates noise, such as parking lots, generators, and residential uses, shall be located away from the wetland, or any noise shall be minimized through use of design and insulation techniques.

Finding: Noise generated by the Project after completion is expected to be minimal and limited mainly to the substation. The proposed stream restoration and buffer/wetland enhancement plantings at the substation site will help to screen the critical areas from the developed area and reduce noise within critical areas. Noise generated by the substation will be within the noise thresholds for the zoning district. The proposed substation is consistent with other uses in the area, and all equipment will be located within an enclosed area mainly upslope and away from on-site critical areas. Transmission lines within the corridor will generate noise similar to the existing corridor.

Construction noise is regulated per the City Noise Control Code – BCC 9.18. **Refer to the Conditions of Approval regarding Noise in Section X of this Staff Report.**

iii. Toxic runoff from new impervious area shall be routed away from the wetlands.

Finding: See response in section 2 above.

iv. Treated water may be allowed to enter the wetland critical area buffer.
Finding: See response in section 2 above.

v. The outer edge of the wetland critical area buffer shall be planted with dense vegetation to limit pet or human use.

Finding: The Final Mitigation Plan will include dense, native plantings in critical area buffers. As noted previously, Richards Creek substation site is owned and

operated by PSE; as such, human use outside of the developed substation is discouraged. Wetlands and buffers elsewhere in the corridor are generally degraded as a result of human development and extensive use of the corridor. The Final Mitigation Plan will depict tree and other vegetation to be removed within all critical area buffers. Trees within a critical area buffer shall be replaced at a minimum of a 3:1 ratio. Buffer mitigation planting will be directed to sites in the Richards Creek and Coal Creek basins that will allow for the greatest functional improvement to the overall critical areas functions in the project area, and will allow for limiting human and pet intrusion into the mitigation areas. **Refer to the Conditions of Approval regarding final mitigation and monitoring plans in Section X of this Staff Report.**

vi. Use of pesticides, insecticides, and fertilizers within 150 feet of the edge of the stream buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.

Finding: Weed control efforts in stream buffers will generally employ manual removal. Plans also call for the use of aquatic certified glyphosate to be used in reed canary infested areas. Any additional pesticide, insecticide, and fertilizer use shall be done in accordance with the City of Bellevue's "Environmental Best Practices" Parks Department Manual. **Refer to the Conditions of Approval regarding BMPs in Section X of this Staff Report.**

Consistency with LUC 20.25H.105 Mitigation and Monitoring-Additional Provisions: Wetland Enhancement as Mitigation

Finding: The overall strategy for wetland mitigation proposed by PSE, after all feasible avoidance measures were incorporated in the plans, is to mitigate for impacts in each of the two sub-basins where impacts will occur (i.e., the Richards Creek and Coal Creek sub-basins), and to consolidate mitigation to the extent possible to provide the best overall benefits from mitigation.

Most of the wetland impacts in the Richards Creek sub-basin will occur on the Richards Creek substation site. Therefore, this site is preferred for mitigation actions. As the Critical Areas Report notes wetland restoration and creation were considered for the property, but determined to be infeasible due to existing site conditions (most of the remaining vegetated area on-site is already wetland or stream) and the inability to appropriately buffer any new or restored wetland area. Existing wetland and wetland/stream buffers are degraded on the Richards Creek substation site and therefore provide ample opportunity for enhancement, the proposed mitigation strategy.

Enhancement actions will consist of removing/reducing the presence of nonnative plant species and installing a diverse native plant community are noted in the tables below.

The wetlands will also be enhanced with a realigned stream channel, installation of large woody debris, removal of invasive vegetation, and installation of native vegetation. The stream realignment allows for the creation

of more complex and higher quality riparian wetland and a buffer of substantial width along both sides of the stream, whereas the existing alignment is straight, borders a paved area, and is largely lined with reed canarygrass and bittersweet nightshade.

Table IV-7. Summary of Impacts and Compensatory Mitigation

IMPACTS and COMPENSATORY MITIGATION						
Critical Area Name	**Category**	**Type of Impact**	**Quantity (SF)**	**Mitigation Ratio**	**Mitigation Required (SF)**	**Amount (SF) and Location of Mitigation Proposed[2]**
Wetlands						
Wetland A	III	Conversion	9,945	2:1	19,890	19,890 Wetland A
Wetland A	III	Permanent	397	4:1	1,588	1,588 Wetland A
Wetland B	III	Permanent	2,060	4:1	8,240	3,587 Wetland A 4,653 Wetland D
Wetland D	II	Conversion	100	3:1	300	300 Wetland D
Wetland D	II	Permanent	41	6:1	246	246 Wetland D
Wetland H	III	Conversion	73	2:1	146	146 Wetland D
Wetland H	III	Permanent	77	4:1	308	308 Wetland D
				TOTAL	**30,718**	**30,718**
Buffers						
Combined Buffers	N/A	Permanent	23,893	1:1	23,893	23,893 Combined Wetland A/Wetland D/Stream C buffer
Combined Buffers	N/A	Conversion	22,886	0.5:1	11,443	11,443 Combined Wetland A/Wetland D/Stream C buffer
Combined Buffers	N/A	Redevelopment [3]	47,512[3]	N/A[3]	0[3]	NA
				TOTAL	**35,336**	**35,336**
ADDITIONAL RESTORATION (not required to mitigate impacts)						
Critical Area Name	**Category**	**Type of Activity**	**Quantity (SF)**			**Description**
Stream C	N/A	Restoration (Realignment)[4]	3,557			New stream channel
Wetland A	III	Enhancement	6,215			Area between new and old stream channel, outside of stream project grading boundaries
Wetland D	II	Enhancement	12,050			Area of Wetland D outside of stream project grading boundaries

1. Only activities resulting in a long-term change are included. Temporary impacts will be restored in place and are not shown in this table.
2. All wetland mitigation proposed is wetland enhancement.
3. This buffer area is already developed and is considered non-functioning; therefore, no mitigation is required.
4. Existing stream channel will be abandoned (not filled) with stream restoration/realignment activities.

Impact Location and Quantity	Existing condition	Proposed action
Wetland D (Richards) Permanent Impacts: 41 SF Vegetation Conversion: 100 SF	Wetland D is a riverine wetland dominated by an overstory of Pacific willow and red alder, and an understory significantly degraded with reed canarygrass, Himalayan blackberry, and nightshade.	Wetland fill associated with development of Richards Creek Substation culvert replacement. Conversion from forested wetland area to shrub wetland area to accommodate new, higher voltage transmission lines. Temporary impacts associated with clearing limits for Richards Creek Substation. Stream & wetland enhancement: wetland enhanced with removal of invasive vegetation, installation of native vegetation, realigned stream channel. The stream realignment allows for the creation of more complex and higher quality riparian wetlands and buffers of substantial width along both sides of the stream.
Wetland H (Richards) aka Wet JB01 Permanent Impacts: 77 SF Vegetation Conversion: 73 SF	Wetland H is a slope wetland that consists of native and non-native plant species. Prevalent invasive, non-native species are located in the existing transmission line corridor and include reed canarygrass, birdsfoot trefoil, and Himalayan blackberry.	Wetland fill associated with pole footprints. Conversion from forested wetland area to shrub wetland area to accommodate new, higher voltage transmission lines. Temporary impacts associated with clearing limits for Richards Creek Substation, pole work areas, and access routes. Mitigation for wetland loss and conversion provided through enhancement of Wetland D.

Impact Location and Quantity	Existing condition	Proposed action
Wetland A (Richards) Permanent Impacts: 397 SF Vegetation Conversion: 9,945 SF	Wetland A is a large slope wetland that crosses existing PSE transmission line corridor. As a result, areas that have experience past impacts or disturbance from the transmission line are degraded and consist of Himalayan blackberry and reed canarygrass monocultures.	Wetland fill associated with development of Richards Creek Substation, including culvert replacement and pole footprints. Conversion from forested wetland area to shrub wetland area to accommodate new, higher voltage transmission lines and substation. Temporary impacts associated with clearing limits for Richards Creek Substation and pole work areas. Stream & wetland enhancement: wetland enhanced with removal of invasive vegetation, installation of native vegetation, realigned stream channel, installation of LWD. The stream realignment allows for the creation of more complex and higher quality riparian wetlands and buffers of substantial width along both sides of the stream, whereas the existing alignment is straight, borders a paved area, and is largely lined with reed canarygrass and nightshade.
Wetland B (Richards) Permanent Impacts: 2,060 SF	Wetland B is a small slope wetland that is dominated by an understory of dense Himalayan blackberry. Some native plants are present to a lesser extent and include Pacific willow, red alder, salmonberry, giant horsetail, and lady fern.	Wetland fill associated with development of Richards Creek Substation. Mitigation for wetland loss provided through enhancement of Wetlands A and D.

Coal Creek Sub-Basin Wetlands

Wetland Impacts: Wetland MB01 is a depressional wetland in the existing transmission line corridor and adjacent to a well-used trail. It is dominated by a mix of native and non-native species including Pacific willow, red-osier dogwood, bittersweet nightshade, and Himalayan blackberry. Approximately 1,146 SF of forested wetland area will be converted to shrub wetland area to accommodate the new, higher voltage transmission lines.

Coal Creek Sub-basin Wetland Buffers: Buffer impacts are generally located in the existing transmission line corridor. Due to previous development/disturbance and existing land uses, buffer areas are mostly degraded, consisting of compact soils and invasive vegetation (predominantly Himalayan blackberry and reed canarygrass). Approximately 35 SF of impacts from buffer loss are associated with pole footprints. Also, 7,734 SF of conversion from forested buffer area to shrub buffer area will be converted to accommodate the new, higher voltage transmission lines, as well as temporary impacts associated with access route and pole work areas. **Refer to the Conditions of Approval regarding final wetland and buffer mitigation and monitoring plans in Section X of this Staff Report.**

Wetland buffer enhancement at the Somerset substation site will include the removal of invasive vegetation and installation of native vegetation.

Table IV-8. Impact & Restoration Summary

IMPACTS					
Critical Area Name	**Category**	**Type of Activity**	**Quantity (SF)**	**Mitigation Ratio**	**Mitigation Required (SF)**
Wetland MB01	III	Conversion	1,146	2:1	2,292
Combined Buffers	na	Permanent	35	1:1	35
Combined Buffers	na	Conversion	7,734	0.5:1	3,867

RESTORATION			
Critical Area Name[2]	**Category**	**Type of Activity**	**Quantity (SF)**
Somerset Wetland A	IV	Enhancement	2,300
Combined Somerset Buffers	NA	Enhancement	3,950

IMPACT & RESTORATION SUMMARY					
				Mitigation Proposed	
Critical Area Type	**Type of Activity**	**Quantity (SF)**	**Total Mitigation Required (SF)**	**Type**	**Qty (SF)**
Wetland	Conversion	1,146	2,292	Enhancement	2,300
	Permanent	0			
Buffer	Conversion	7,734	3,902	Enhancement	3,950
	Permanent	35			

1. Only activities resulting in a long-term change are included. Temporary impacts will be restored in place and are not shown in this table.
2. Critical Areas as identified in the Somerset Substation wetland delineation (The Watershed Company, February 2017) and delineation report, documented separately from the Energize Eastside delineation study.

Consistency with LUC 20.25H.125 Performance Standards – Landslide Hazards and Steep Slopes Project Impacts:

A. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography.

Finding: Site improvements (pole removal, pole replacement, access routes, and vegetation management) are not anticipated to adversely impact the natural contour of regulated slopes. It is anticipated that a temporary working bench may be necessary to install poles in some locations. Temporary access routes will generally follow preciously established access trails and routes and developed landscape. Therefore, little cutting, or filling will be required. Geotechnical recommendations describe clearing activities be restricted to that necessary to auger the hole for the poles.

The Richards Creek substation site activities that include vegetation management, tree removal, and temporary access routes (associated with the proposed pole replacement activities) will maintain the overall existing site topography. A soldier pile wall is proposed at the Richards Creek substation site. The use of retaining wall for the new substation reduces disturbance and grading of existing slopes.

So long as geotechnical recommendations are followed, the proposal will minimize alteration to slope contours. **Refer to the Conditions of Approval regarding geotechnical reporting and recommendations in Section X of this Staff Report.**

B. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation.

Finding: The existing roadway will be realigned and will not significantly impact natural landforms and vegetation. Soldier pile walls and retaining walls are proposed for the Richards Creek substation site. The use of retaining walls will reduce disturbance and grading of the existing natural slopes, which would be otherwise necessary without construction of the walls.

Site improvements include localized vegetation management, including tree removal, and the use of existing access routes (associated with the proposed pole replacement activities). The proposed tree removal and surface disturbance will be limited to reduce potential impacts to natural landforms and vegetation. Tree removal is limited to that needed for pole installation and to meet federal NERC standards to maintain safe clearances between vegetation and utility lines.

C. **The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties.**

Finding: The proposed development includes vegetation management, including tree removal and the use of existing access routes (associated with the proposed pole replacement activities), which will be followed by mitigation measures to reduce potential impacts to geologic hazards that include landslide and steep slope hazards.

Vegetation removal may impact slope stability by reducing root strength in soil and by modifying surface and subsurface hydrology. Page 2 of GeoEngineers Geotechnical Report dated July 11, 2017 and found in Attachment I to this Staff Report, notes "*In general, tree removal will increase the impact on slope stability for steep slopes or landslide hazard areas. However, fewer impacts are expected in areas where tree removal is isolated to one or two trees and the steep slope or landslide hazard area is otherwise stable and well vegetated. Additionally, fewer impacts are expected at the toe of the slope, compared to tree removal within the body or at the top of the slope. Much of the tree removal near/on steep slope areas north of I-90 are situated in the PSE parcel that will be developed for the Richards Creek Substation. GeoEngineers completed a geotechnical engineering report for this substation in a report dated September 23, 2016 and an addendum report dated April 4, 2017. The new substation will require some retaining walls along the south side of the parcel where existing steep slopes are mapped, and a soldier pile wall on the east side of the site. The soldier pile wall (and eastern limits of the new substation) will be located east of the existing eastern steep slope area. Thus, construction of the substation and soldier wall will result in removal of this small steep slope area and the hillside will be stabilized by the wall. As such, the proposed tree removal located within the steep slopes of the substation limits will not affect the stability of the hillside."*

Mitigation measures include BMPs to reduce potential impacts to geologic hazards in the vicinity of neighboring properties. BMPs include plant replacement, scattering trimmed or removed tree debris, and chipping wood to reduce potential impacts to work areas. Removal of vegetation by hand and/or using limited access machinery will reduce potential impacts to landslide and steep slope hazard areas. If these BMPS and geotechnical recommendations are implemented, GeoEngineers determines that the proposed Project will not require additional buffers to protect geological hazard areas. To ensure recommendations are followed, a project geotechnical engineer shall be on-site to inspect construction activities and a report documenting adherence with the recommendations shall be submitted

of the City of Bellevue. **Refer to the Conditions of Approval regarding geotechnical recommendations in Section X of this Staff Report.**

D. **The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall.**

Finding: No retaining walls or grading activities are proposed in the transmission line corridor. Soldier pile walls and retaining walls are proposed for the Richards Creek substation site. The use of retaining walls will reduce disturbance and grading of the existing natural slopes, which would be otherwise necessary without construction of the walls to accommodate a flat area for the substation improvements.

E. **Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer.**

Finding: Neither in the transmission line corridor nor the substation site are new impervious surfaces proposed within landslide or steep slope critical areas or critical area buffers.

F. **Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criterion.**

Finding: No change in grade associated with a building footprint is proposed within the transmission line corridor. And no part of the proposal includes the creation of yard area.

G. **Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation.**

Finding: No retaining walls are proposed within the transmission line corridor. However, for stability purposes, drilled pier foundations will be used for select poles in the corridor. The new substation is not a building and, thus, does not have typical foundation walls, except for the control house within the substation; as such, soldier pile and retaining walls will be necessary to retain the required grade changes. PSE does not propose the use of rockeries. Where poles cannot be installed using the direct imbed method, PSE shall

submit plans showing compliance with geotechnical recommendations made by GeoEngineers June 2016 for any foundation designed poles. **Refer to the Conditions of Approval regarding geotechnical recommendations in Section X of this Staff Report.**

H. **On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification.**

Finding: The new substation cannot be tiered and was situated east of the existing Olympic pipeline system. This requires construction of a soldier pile wall east of the existing slope area. No additional structures are proposed.

I. **On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types.**

Finding: No parking or garage structures are planned for the new substation site. Pile-supported deck structures are not feasible for a substation. The substation grades will require cutting into the slope on the east side, which will then be retained with a soldier pile wall.

J. **Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210. (Ord. 5680, 6-26-06, § 3).**

Finding: BMPs for pole installation will be implemented during construction and the disturbed area will be restored after pole installation by seeding or revegetating, essentially covering the disturbed areas. In the event that work areas are wet or have standing water, driving mats will be used under all equipment. Additionally, for poles located in geological hazard areas, the old poles will be cut off approximately 1–2 feet below the ground surface and the remaining portion of each pole left in place.

Where pole installation requires the permanent removal of vegetation PSE shall prepare a final mitigation plan showing vegetation to be replaced in the vicinity of the permanent impact. Any permanent impacts to vegetation within a critical area or critical area buffer shall include replacement planting area. Trees proposed for removal in a critical area or critical area buffer shall be replaced at a 3:1 ratio. Tree species shall be native species found in the City's native plant list located in the Critical Areas Handbook.

Where vegetation clearing is required to reestablish access on existing trails or old access routes, BMPs will be implemented; these BMPs may include, but are not limited to outsloping road surfaces, crowning road surfaces (where appropriate, such as at ridge tops and where roads climb gently inclined surfaces) and installing water bars or rolling dips at regularly spaced intervals to avoid concentrating surface water flow along the road surface. After construction, disturbed areas will be graded to a stable, free-draining configuration, treated with appropriate erosion control measures, and seeded. Grading associated with reestablishment and post-construction stabilizing will be conducted on an as-needed basis and limited in vertical and horizontal extent. Most, if not all, access routes can be abandoned following construction using erosion control measures and seeding.

PSE proposes options for mitigation of vegetation management and tree removal in geologic hazard areas include limiting disturbance to these areas by large equipment (only by foot and hand-cutting with chainsaws), leaving cut stumps in place, and chipping or scattering tree debris where feasible. In areas where tree removal is clustered, erosion control BMPs will be implemented, such as grass seeding, leaving stumps, scattering straw and/or replacement plantings of native shrubs or small trees to reduce concentrated flows and minimize disturbance.

Refer to the Conditions of Approval regarding the mitigation plan and geotechnical recommendations in Section X of this Staff Report.

V. SUMMARY OF TECHNICAL REVIEWS

A. Noise

The new substation will be an operational noise source. Transformers and their cooling fans generate noise as will ancillary equipment such as air handling equipment or backup generator testing. PSE has established noise standards for transformers (upon initial installation) of 70 and 65 dBA at 1 meter with and without cooling, respectively. This level of noise could be audible at adjacent sensitive land uses, depending on their distance and the existing ambient noise level.

Electrical substations are exempt from the maximum permissible noise levels established in Chapter 173-60 of the Washington Administrative Code. Consequently, substation operations are likely consistent with local municipal codes governing noise sources. However, the substation could result in a noticeable increase in local ambient noise levels and result in a minor noise impact.

The proposed 230 kV transmission lines are not expected to produce a noticeably greater level of noise (from corona effects) than the existing lines.

Mitigation: Although electrical substations are exempt from the maximum permissible noise levels established in Chapter 173-60 of the Washington Administrative Code, the transformers could result in a noticeable increase in local ambient noise levels and therefore elicit an adverse community reaction. The proximity of sensitive land uses was considered when siting the new transformers. PSE's site plans include noise attenuation measures to maintain noise levels at the nearest receptors within 5 dBA of existing ambient noise levels.

B. Clearing and Grading

A Clearing and Grading Permit is required for PSE's proposal per BCC 23.76.035. The permit application must be in accordance with the Clearing and Grading Code, as outlined in the submittal requirements and the Clearing and Grading Development Standards, which are available on the City of Bellevue website at:

https://development.bellevuewa.gov/UserFiles/Servers/Server_4779004/File/pdf/Development%20Services/cg-DevStds2017.pdf

Various soil and erosion conditions will be encountered along the transmission line route, and erosion and sedimentation control should be specifically addressed for each area. Work within critical areas or buffers should be identified on the construction drawings and in the Construction Stormwater Pollution Prevention Plan, and provided with exceptional erosion and sedimentation protection. No untreated construction stormwater will be allowed to discharge in the City storm drain system and/or within the critical areas. Turbidity monitoring will be required at all discharge points.

C. Utilities

The CUP application has been reviewed and no further utility revisions are needed at this time. The Utility Department approval of the CUP application is based on the

preliminary utility design only. This conceptual review of the proposal has no implied approvals of the engineering design and specifications. Changes to the site layout may be required to accommodate the utilities. Minimum setback requirements shall be met during the review and approval of the utility permit application(s).

Storm Drainage: The redevelopment will provide water quality mitigation that will treat the proposed road surface (pollution-generating surface). Stormwater runoff from the hard surface will be collected in a detention system, and the water quality design flow rate must be the full 2-year release rate from the detention facility for this location. An enhanced water quality facility will most likely be required because the runoff for this site flows to fish-bearing stream.

Refer to the Conditions of Approval regarding utilities in Section X of this Staff Report.

D. Transportation

Traffic Impacts and Mitigation

Traffic impacts from this Project will be temporary and occur only during the construction phase. These impacts will be the result of needed travel lane and sidewalk closures to allow for safe installation of power lines within City right-of-way. Appropriate mitigation will be specified in the required right-of-way permit for this project (traffic control, detours, etc.). No permanent traffic impacts will be created by this project.

Street and Access Improvements

PSE proposes to construct the new Richards Creek substation and to upgrade 3.3 miles of existing power transmission lines between PSE's existing Lakeside switching substation and the southern city limits of Bellevue. The existing wood H-frame poles will be replaced with steel monopoles within the existing utility corridor. Some poles/structures will be located within City right-of-way (ROW).

Access to Richards Creek substation will be provided via the existing driveway from SE 30th Street.

Access to the existing and proposed poles/structures and transmission lines will be provided by using the existing or historic access corridor, and by creating new access roads as necessary. At some sites, access roads my need to be improved to accommodate construction equipment. All work in ROW related to these access roads needs ROW Use Permits and must meet City of Bellevue and current Americans with Disabilities Act (ADA) standards.

The final engineering plans must show all transportation-related improvements and must be consistent with the Transportation Development Code (Chapter 14.60 BCC), Transportation Department Design Manual, and the ADA prior to approval of construction drawings.

1. The Richards Creek substation driveway is located at the east end of SE 30th Street (dead end street). The existing driveway will be improved to provide a concrete driveway approach at SE 30th Street per the City of Bellevue Transportation Design Manual. Driveway approach shall be a minimum of 26

feet wide. Minimum of 30-feet distance is required from the right-of-way line to the new gate located on the private driveway/access road.

2. A street light analysis is required for SE 30th Street. Street lighting shall meet Bellevue's minimum standards.

3. Engineering design plans must be submitted for review and approval for each new and removed pole located within City right-of-way, sidewalk easements, and within 20-feet of the ROW or sidewalk easement areas.

4. All new or modified access road connections to public roadways for the installation of new structures and overhead transmission lines, and removal of existing poles must meet Transportation Design Manual requirements.

5. All areas disturbed (i.e., pavement, curb and gutter, landscaping, driveways, etc.) by the Project shall be restored after construction to its previous or an improved state per City of Bellevue ROW standards including current ADA standards.

6. All structures installed by the Project must meet the City's sight distance criteria per the Transportation Design Manual (RL-110-1, RL-110-1, RL-120-1 and sections 21 and 22).

Use of the Right of Way During Construction
Applicants often request use of the right of way and of pedestrian easements for materials storage, construction trailers, hauling routes, fencing, barricades, loading and unloading and other temporary uses as well as for construction of utilities and street improvements. A Right of Way Use Permit for such activities must be acquired prior to issuance of any construction permit including demolition permit. Sidewalks may not be closed except as specifically allowed by a Right of Way Use Permit. **See Section X for related Conditions of Approval regarding use of the ROW.**

Pavement Restoration
The City of Bellevue has established the Trench Restoration Program to provide developers with guidance as to the extent of resurfacing required when a street has been damaged by trenching or other activities. Under the Trench Restoration Program, every street in the City of Bellevue has been examined and placed in one of three categories based on the street's condition and the period since it has last been resurfaced. These three categories are "No Street Cuts Permitted," "Overlay Required," and "Standard Trench Restoration." Each category has different trench restoration requirements associated with it. Damage to the street can be mitigated by placing an asphalt overlay well beyond the limits of the trench walls to produce a more durable surface without the unsightly piecemeal look that often comes with small strip patching.

The applicant will be required to restore all damaged pavement within City right-of-way caused by construction activities related to this Project. Limits and extent of pavement restoration shall be as required by the Right-of-Way Use Permit. **See Section X for related Conditions of Approval regarding pavement restoration.**

E. Fire

Bellevue Fire Department has no concern with the Energize Eastside proposed location as submitted. Any changes to the location will require further review. Because the proposal is using the existing corridor, no additional fire department staffing, or resources will be required as a result the Project.

VI. STATE ENVIONMENTAL POLICY ACT (SEPA)

The City of Bellevue, in cooperation with the Partner Cities of Kirkland, Newcastle, Redmond, and Renton, conducted environmental review of the Energize Eastside project over the course of several years. The culmination of this environmental review was issuance of the March 1, 2018 Final EIS. The Final EIS built upon the previous Phase 1 Draft EIS and Phase 2 Draft EIS, released in January 2016 and May 2017, respectively.

An EIS is the most detailed form of environmental review required under SEPA and is prepared when an agency determines that it is probable that a project would have significant environmental impacts. The Phase 1 Draft EIS assessed a range of impacts and implications associated with broad alternatives for addressing PSE's objectives in a non-project, or programmatic, EIS. The environmental review undertaken by the Partner Cities and memorialized in the Phase 2 Draft EIS and Final EIS considered the impacts on the environment of the entire Energize Eastside project throughout each jurisdiction—extending from Redmond in the north to Renton in the south. The Phase 2 Draft EIS incorporated the Phase 1 Draft EIS by reference and presented a project-level environmental review.

Based on the results of the Phase 2 Draft EIS analysis, PSE refined the proposed route of the transmission lines and associated Project components. The Final EIS assessed PSE's project-level proposed alignment (Willow 1) and considered environmental impacts of the entire Project in light of this proposed alignment (see Chapters 1, 2, 4, 7, and 8 of the Final EIS). While environmental analysis in this Staff Report focuses on the impacts reviewed for the portions of the Project currently under consideration in connection with Permit Nos. 17-120556-LB and 17-120557-LO, the environmental review in the Final EIS was not limited to a segment or portion of the Energize Eastside project. Instead, the Final EIS presented a comprehensive environmental assessment of the entire Project, including a full analysis of potential impacts and cumulative impacts associated with the construction and operation of PSE's proposed alignment.

The Energize Eastside Project Final EIS and supporting documentation fulfill SEPA requirements for the Energize Eastside project and are incorporated by reference under the terms of BCC 22.02.020 and WAC 197-11-635. The Final EIS, along with all background and supporting analyses, studies, and technical reports are publicly-available here:

http://www.energizeeastsideeis.org/library.html

In addition, the Energize Eastside Project Final EIS together with the supporting documentation are available for review in the City of Bellevue Records Room, Lobby Floor, Bellevue City Hall, 450 110th Avenue NE. Likewise, PSE submitted technical information with the permit applications, which is attached hereto and/or included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO. The City also requested additional information from PSE during the land use process, and these requests are included in the DSD files as well.[24]

[24] See, e.g., Letter from Heidi Bedwell, City of Bellevue Environmental Planning Manager, to Brad Strauch, PSE Program Manager, dated August 14, 2018. The City's August 14, 2018 letter to PSE is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

The Bellevue Environmental Procedures Code, Chapter 22.02 BCC, provides substantive authority to mitigate impacts disclosed through the environmental review process. Pursuant to RCW 43.21C.060, the City's Comprehensive Plan is a possible basis for the exercise of substantive SEPA authority. BCC 22.02.140.B.1. Although PSE's proposal is consistent with the Comprehensive Plan,[25] the Comprehensive Plan is nonetheless a designated SEPA policy basis for substantive conditioning of PSE's proposal.

Substantive SEPA authority to condition PSE's proposal is available in cases where development regulations do not exist or do not apply, or where unanticipated impacts occur that are not mitigated by existing regulations. In cases where the City has adopted development regulations to systematically avoid or mitigate adverse impacts, those standards and regulations, where applicable, will normally constitute adequate mitigation of the impacts. LUC 22.02.140.C.

To the extent the City's development regulations do not adequately regulate pipeline safety, the exercise of substantive SEPA authority, based on applicable Comprehensive Plan policies, provides for the imposition of mitigation measures identified in the Final EIS. The Conditions of Approval contained in Section X of this Staff Report identify specific mitigation measures, and the discussion below regarding Environmental Health—Pipeline Safety identifies the applicable Comprehensive Plan policy bases for substantive conditioning of the proposal under SEPA.

Within the South Bellevue Segment, the Final EIS disclosed that the Energize Eastside project could have significant unavoidable adverse impacts to the aesthetic environment where the transmission lines will traverse a portion of the Somerset neighborhood. PSE's proposal is compatible and consistent with the land use pattern in this area of Somerset, but the increased pole height in this area will contrast with the low buildings and low vegetation that result from the private covenants protecting views in Somerset to a greater extent than the current transmission line. The significant, unavoidable adverse impacts in Somerset are discussed below in Section VI.C and in Section VIII (Applicable Decision Criteria) of this Staff Report.

Finally, and consistent with the analysis contained in the Phase 1 Draft EIS, the Phase 2 Draft EIS, and the Final EIS, a discussion of the elements of the environment that are not significantly affected by PSE's proposal after application of the City's codes, regulations and standards is included below as well.

A. Trees

As indicated in the Final EIS and Phase 2 Draft EIS (see Phase 2 Draft EIS, Section 3.4.2.1), trees provide numerous functions and benefits, including wildlife habitat for breeding, rearing, and foraging. Trees also provide direct and indirect benefits to aquatic habitats by reducing stormwater flows, controlling stream temperatures (by providing shade), and reducing streambank erosion. Heavily vegetated and forested areas also provide wildlife corridors to enhance wildlife population connectivity to various habitat types that support such activities as breeding, foraging, and rearing.

[25] See Section VIII.D.1 – Applicable CUP Decision Criteria (LUC 20.30B.140) for a discussion of the proposal's consistency with the Comprehensive Plan.

Approximately 580 significant trees will be removed in the South Bellevue Segment as part of PSE's proposal, which is consistent with the analysis in the Final EIS (see Final EIS, Section 4.4.5). Of this total, approximately 95 trees are located either in the City right of way or within a City-owned (parks or utilities) property. The Final EIS concluded that application of codes, standards, and regulations—including the City's critical areas requirements contained in Chapter 20.25H LUC—would adequately mitigate potential impacts due to vegetation removal in the South Bellevue Segment (see Final EIS, Section 4.4 & 4.4.5.6).

The removal of 66 trees located in the right-of-way will be mitigated using the methods outlined in the Council of Tree and Landscape Appraisers, *Guide for Plant Appraisal*, and a total value of the trees will be provided to the City of Bellevue for replanting in the City right-of-way or other City-owned parcels. PSE shall prepare a final tree removal plan depicting trees to be removed in the right-of-way including their size and species. This plan shall be submitted to the City of Bellevue for approval. PSE and the City will identify and agree upon an independent third party certified arborist to determine the total value of trees removed from the City right-of-way. The arborist shall use the methods outlined in the Council of Tree and Landscape Appraisers, *Guide for Plant Appraisal*, and PSE shall pay for the arborist appraisal.

For the removal of trees located either within a City-owned (parks or utilities) property or private property, tree replacement will be established through a ratio based on tree size (See Table VI-1 below). Approximately 29 trees are located within a City-owned property. Of the total trees proposed for removal, approximately 485 trees are located on non-city owned property, including the Richards Creek Substation property owned by PSE. Specifically, 108 trees are located on the Richards Creek Substation site, and the remaining 377 trees are located within the 3.3-mile South Bellevue Segment transmission corridor. These trees located on private property will also be replaced based the following replacement ratio:

Table VI-1. Tree Replacement Ratio

Tree Size (dbh)	Replacement Ratio
< 6"	As requested by property owner
6" to ≤ 12"	1:1
> 12" to < 30"	2:1
≥ 30"	3:1

Any trees located in a critical area or critical area buffer shall be replaced at a 3:1 replacement ratio regardless of their size. In order to mitigate for the proposed tree removal, PSE proposes an adaptive Tree Replacement approach. The approach includes the following steps:

- At the time of construction, document trees that are removed on a property-by-property basis. This documentation will include the tree species, inventory tag number, and diameter at breast height (dbh) at the time of removal.

- Cross-reference the documentation with the proposed landscape and tree replacement plan that was provided to the property owner. The plan will be based on PSE's Energize Eastside 2018 plant palette. Changes to the proposed plan could occur based on a number of factors, including property ownership changes or prior tree removal by the owner.
- Update the landscape and tree replacement plans to incorporate any changes and provide to the City as documentation. This will document each tree that was removed and the replacement trees that are installed.
- Upon completion of replanting, PSE will provide a summary report that documents the number and types of trees that have been removed and the replacement trees that have been planted.
- PSE will guarantee plant survival for one year after the planting, with replacement of the plant as the primary remedy.
- Based on the agreed-upon replacement ratios, PSE will provide a financial guarantee that covers the estimated cost of tree replacement (including materials and labor) prior to the issuance of the Clearing and Grading permit. Release of said guarantee by the City will occur upon PSE's submittal of the summary planting report.
- To serve as a basis for the financial guarantee and overall tree replacement requirement, PSE is proposing to replace trees using the ratios noted above in Table VI-1.

It is anticipated that most replacement trees can be planted in areas where the tree removal is occurring. However, if this is not feasible then PSE will focus tree replacement efforts in secondary planting areas outside the managed right-of-way but within PSE's easement boundaries or on other portions of those properties where trees have been removed as part of the project. PSE will give preference to native planting for tree replacement in these areas. If the number of trees cannot be met within the corridor then PSE will identify additional planting areas. An emphasis will be placed on finding receiving sites within 0.25 miles of the corridor. A GIS analysis will identify these opportunity areas and PSE will reach out to landowners to discuss interest in receiving plant material.

Finally, if tree plantings required to meet the tree replacement ratios proposed cannot be accommodated by the previously discussed approaches, PSE will pursue planting programs to address the final tree planting. PSE has also been participating in the Energy Saving Trees program, which provides trees to those residents that want to add trees to their property in a manner that can help offset energy usage. While in most cases these trees are not along the project corridor, they are in the City and help advance mitigate for potential tree loss due to factors such as mortality and property owner changes (i.e., a new property owner removes existing trees due to landscaping preferences).[26] PSE initiated this program in early 2018 in an effort to offset anticipated tree removal associated with the Energize Eastside project. During the spring event, PSE and the Arbor Days Foundation provided 551 trees to 300

[26] Although PSE's proposal is not located within a Shoreline Overlay District, the advance mitigation concept has also been adopted by the City in Chapter 20.20E LUC in connection with Shoreline Overlay Districts (see LUC 20.25E.065.F.8.i.).

Bellevue residents. During a fall 2018 event, another 163 trees were provided to Bellevue residents for a total of 714 trees offered as part of this program. These figures are included to demonstrate the success of the planting program. However, any trees used to account for replanting as part of the subject permit shall be offered after clearing and grading permit submittal and before construction commences.

As memorialized in the recommended Conditions of Approval described below in Section X of this Staff Report, PSE shall submit a final Tree Replacement plan as part of the required clearing and grading permits consistent with Attachment E (Vegetation Management Plan), which was submitted as part of PSE's application. More generally and consistent with the Final EIS, the Conditions of Approval identified below in Section X adequately mitigate expected impacts caused by tree removal. **Refer to the Conditions of Approval in Section X of this Staff Report for the specific mitigation measures.**

B. Environmental Health – Pipeline Safety

The Project site is occupied by a portion of the Olympic Pipeline system, which consists of 400 miles of underground pipelines within a 299-mile corridor. One of the pipelines crosses through the middle of the Richards Creek substation site and continues along the South Bellevue Segment, centrally located within PSE's existing corridor. Likewise, the presence of transmission lines in the corridor contributes to the long-term risk of an accidental release by increasing the risk of corrosion due to electrical interference, and by providing a path for a ground fault or lightning strike to conduct electricity and cause damage to the pipelines. Any unintentional release from the pipelines poses serious safety risks, the severity of which will depend on the characteristics and quantity of the pipeline product released, the presence of ignition sources, and the geographic context of the release.

The Final EIS concluded that the probability of a pipeline release and fire occurring and resulting in fatalities remained low under PSE's proposed alignment, both during construction and over the long term. However, potential public safety impacts would be significant if this unlikely event were to occur. Section 4.9 of the Final EIS analyzed the environmental consequences of such an incident, along with a description of the operational concerns for the Energize Eastside project that affect pipeline safety. Section 5.9 of the Final EIS addressed the construction aspects of the Project that affect pipeline safety. Section 5.9.4 of the Final EIS identified recommended mitigation measures applicable during construction. Section 4.9.8 of the Final EIS described the mitigation measures that would be used during operation of the Project and recommended additional measures to avoid, minimize, and mitigate environmental health and safety impacts related to pipeline safety.

PSE's proposal incorporates some of the recommendations made during the EIS process related to pipeline safety, including the following engineering aspects: initially operate both lines at 230 kV rather than one line at 230kV and the other line at 115kV; minimize points of pipeline and transmission line divergence along the corridor; use a delta conductor configuration; and locate poles and pole grounds away from the pipeline(s). PSE also will perform an additional AC Interference

Study prior to construction that incorporates the final transmission line route, configuration, and operating parameters to confirm that current densities remain within acceptable levels, and to inform Olympic of any locations where additional measures may be needed to protect the pipelines. The full pipeline safety assessment is available at Section 4.9 of the Final EIS.

As the pipeline operator, Olympic Pipeline Company (Olympic) is responsible for operating and maintaining its pipelines in accordance with or to exceed the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Minimum Federal Safety Standards in 49 CFR Part 195 (and Washington State UTC's adopted and enhanced regulations contained in WAC, Title 480). The regulations are intended to ensure adequate protection for the public and to prevent pipeline accidents and failures.

Because Olympic, the pipeline operator, is responsible for the safety of its pipeline system in compliance with federal safety requirements, safety measures to be used as part of the Project will be determined by Olympic in coordination with PSE and based on a review of final design, site-specific conditions, and field measurements. Olympic has indicated it will identify specific measures, or a suite of measures, following the detailed engineering analysis of the final design and based on site-specific conditions and field measurements conducted at project start-up and during peak loading scenarios, and in consideration of the AC Interference Study that incorporates the final transmission line route, configuration, and operating parameters. After the transmission line is installed and energized, Olympic is expected (due to its independent obligation to protect the pipeline from damage) to measure the AC interference with the pipeline in order to ensure all interference risks have been fully mitigated under steady-state operation of the transmission line.

A primary goal of the City of Bellevue's Utilities (UT) Element of the Comprehensive Plan is "to ensure reliable utility service is provided in a way that balances public concerns about infrastructure safety and health impacts, consumer interest in paying a fair and reasonable price for service, potential impacts on the natural environment, and aesthetic compatibility with surrounding land uses." With that goal in mind, Bellevue's Comprehensive Plan Policy UT-94 states the following: "*Require in the planning, siting, and construction of all electrical facilities, systems, lines, and substations that the electrical utility strike a reasonable balance between potential health effects and the cost and impacts of mitigating those effects by taking reasonable cost effective steps*." Several UT Element policies call for ensuring that health and safety are protected as infrastructure projects are developed, including UT-3 ("use design and construction standards that are environmentally sensitive, safe, cost-effective, and appropriate").

Although the probability of a pipeline release that results in a fire and/or injury or fatalities is low, the potential public safety impacts of such an event would be significant. The Conditions of Approval in Section X of this Staff Report impose reporting and coordination requirements that are intended to facilitate transparency and City oversight—to the extent feasible and available to a local jurisdiction—in connection with pipeline safety. These requirements include measures to protect the pipelines from interaction with the new transmission lines; the submission of a Construction Management and Access Plan regarding pipeline safety; various field

verification, engineering, construction, and monitoring requirements; and documentation showing coordination between PSE and Olympic to evaluate and implement mitigation measures to reduce electrical interference on the Olympic pipeline system to safe levels.

The specific Conditions of Approval addressing pipeline safety are intended to ensure that every effort is made to minimize risks to public safety and strike a balance between potential health effects and the costs of mitigating those effects. Therefore, Project-specific mitigation measures, as proposed in the Final EIS and as applicable to PSE's proposal, are required and included in the Conditions of Approval pursuant to BCC 22.02.140.B.1 and 22.02.140.C.

C. Impacts to Scenic Views and Aesthetic Environment in Somerset

Changes to the aesthetic and visual environment will occur as a result of development of the new Richards Creek substation and transmission lines. As the analysis in the Final EIS confirmed, contrast with the existing aesthetic environment will generally be low due to the location of the substation and the transmission lines within the existing corridor. The one exception is where the transmission lines will traverse a portion of the Somerset neighborhood.

Building and vegetation heights are lower in Somerset than other areas of the corridor due to private covenants, making the existing aesthetic environment within that neighborhood unique when compared to other neighborhoods in Bellevue along the corridor. As a result, the degree of contrast created by the taller poles will be substantial. Figure VI-1 shows the aesthetic impact area along the segment (immediately uphill and downhill of the transmission lines). Due to this contrast, the Final EIS disclosed significant unavoidable adverse impacts to the aesthetic environment in the approximately 0.8-mile Somerset segment along the existing corridor in Somerset.

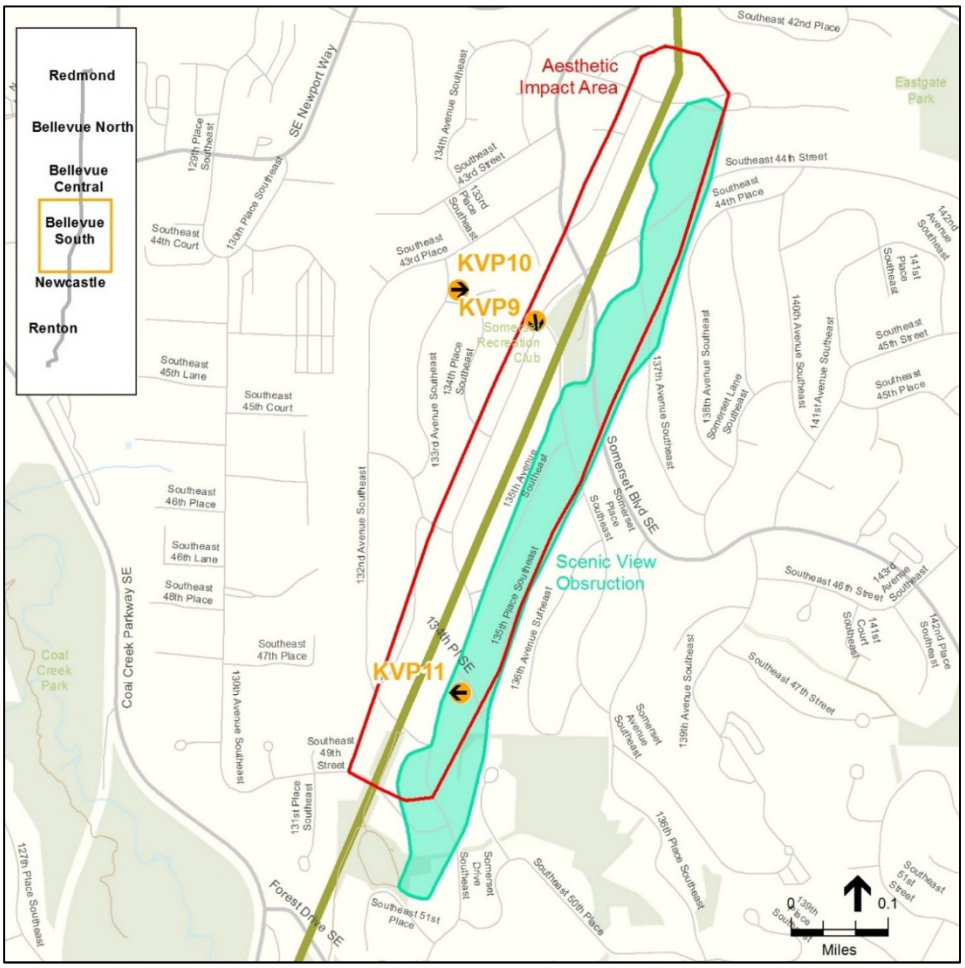

Figure VI-1. Aesthetic Impact Area and Scenic View Obstruction Area

As discussed above, a primary goal of the City of Bellevue's UT Element is "to ensure reliable utility service is provided in a way that balances public concerns about infrastructure safety and health impacts, consumer interest in paying a fair and reasonable price for service, potential impacts on the natural environment, and aesthetic compatibility with surrounding land uses." A robust economy and sustainable city require adequate and reliable power supply (see Policy UT-99). This requires a balance between the needs of a regional electrical utility and the desire for the utility to be compatible with the local context and land use pattern (UT-95, UT-96, UT-97, and UT-99).

PSE's electrical utility facilities in their current locations have become a fixture in the landscape and are permitted in all land use districts. PSE has also chosen to locate the proposal within a corridor that has long been recognized in the City's Comprehensive Plan as the location for the Project (see Attachment F [Map UT-7]) in order to avoid the introduction of impacts to new areas of the City. PSE has also sited and designed the proposal to minimize impacts to the extent feasible, including modifications to pole design to reduce the necessary height in the Somerset segment to respond to the existing physical characteristics of this unique neighborhood. To address aesthetic impacts to the surrounding environment and reduce contrast with the surrounding environment, PSE shall implement the

proposed pole finishes identified in Attachment J to this Staff Report (see Conditions of Approval in Section X).

Although the aesthetic impacts in the Somerset segment are considered significant, the Project helps ensure reliable electrical service for the City that is considered essential in the Comprehensive Plan, and the City has chosen not to protect private views in policy or code. PSE's proposal was designed to avoid new impacts by using the existing easement; limiting vegetation clearing and replacing trees where possible; positioning new poles and adjusting pole height to the greatest extent possible; and using color treatments on the poles and landscaping to reduce contrast between the Project and its surroundings. Further modifications to necessary pole heights within the Somerset neighborhood would increase the number of poles in the neighborhood (approximately 24 additional poles) and result in additional impacts to the character and appearance of the immediate vicinity (see PSE 9-21-18). An increase in pole number required for shorter poles would result in increased excavation, require more tree removal to accommodate the additional poles, and provide fewer screening options for both the existing and new pole locations within the corridor.

Undergrounding the line was also suggested in the Final EIS as a mitigation measure. However, the cost of doing so would be especially high in Somerset due to severe elevation changes, and it would likely require diverting the Project from the existing transmission corridor due to the presence of the Olympic pipeline and the significant constraints on the location of another underground utility line within the pipeline easement. PSE determined that placing a transmission line underground would require permission from both Olympic (if in the existing corridor) and each property owner along the corridor, regardless of whether the existing corridor or a new corridor was used. Gaining such permission would likely delay the Project and thus not meet the Project objectives regarding timing. Given the high cost of acquiring and developing a new underground corridor, and the likely delays it would entail, undergrounding was not considered a feasible option. Thus, PSE's proposal strikes a reasonable balance between ensuring reliable utility service and maintaining compatibility with surrounding land uses to the greatest extent feasible.

D. Land Use and Housing

PSE's proposal utilizes PSE's existing 115 kV transmission line corridor. Although PSE plans to remove and replace the existing wooden 115 kV H-frame structures, this planned pole replacement would not change existing or future land uses, zoning designations, or housing stock because the land is already in use as a transmission line corridor and does not require additional easements or property acquisitions. PSE's proposal will not result in the removal of existing housing, and the Final EIS determined that impacts to housing would be less-than-significant.

Further, LUC 20.20.255 specifically regulates PSE's proposal. As explained above in Section IV.A, the purpose of LUC 20.20.255 is to regulate proposals for new or expanding electrical utility facilities and to minimize impacts associated with such facilities on surrounding areas through siting, design, screening, and fencing requirements. As explained below in Section VIII, the proposal is also consistent with the applicable Comprehensive Plan policies and the Richards Valley, Factoria, and Newport Hills Subarea policies (see also Attachment G to this Staff Report).

Compliance with the applicable decision criteria (LUC 20.20.255.E) and design standards regarding site landscaping, fencing, and height limitations (LUC 20.20.255.F), along with the Conditions of Approval identified below in Section X, will mitigate impacts to land use.

E. Water Resources.

The Final EIS concluded that potential impacts to water resources as a result of the Richards Creek substation would be less-than-significant because PSE would be required to comply with applicable federal, state, and local regulations to protect water resources and will implement appropriate BMPs to protect nearby water bodies. Application of codes, standards, and regulations—including the City's critical areas requirements contained in Chapter 20.25H LUC—will adequately mitigate expected impacts to water resources resulting from the new Richards Creek substation.

Likewise, potential impacts on water resources associated with the transmission lines and poles in the existing corridor will be fully mitigated through compliance with applicable regulations. As described above in Section IV.B and below in Section VIII and the Conditions of Approval in Section X, impacts on wetlands and buffers will be mitigated in accordance with applicable critical area requirements. Therefore, impacts will be less-than-significant.

F. Plants and Animals

Impacts to trees are discussed above in Section IV.A. Impacts to other plants animals will be adequately addressed through compliance with critical areas regulations and other applicable regulations and standards. For more information, refer to the Critical Areas Land Use Permit discussion in Section VIII of this Staff Report and to the Conditions of Approval in Section X.

G. Environmental Health – Air Quality and Greenhouse Gas Emissions (GHG)

Section 4.5 of the Final EIS disclosed that operational GHG impacts would result primarily from the removal of trees and vegetation that would reduce ongoing sequestration of CO2 from the atmosphere. To a lesser degree, GHG emissions impacts would result from employee vehicle trips to maintain the new facilities. The Final EIS concluded that the sequestration losses resulting from tree removal required by the Project would be less-than-significant. No significant adverse impacts to air quality are expected, and the Conditions of Approval identified below in Section X adequately mitigate expected impacts caused by tree removal.

H. Recreation

As described in the Final EIS, impacts to recreation from PSE's proposed alignment in the South Bellevue Segment would be less-than-significant because vegetation clearing and changes to poles and wires would not affect the use of recreation sites. In reaching this determination, the Final EIS analyzed potential impacts to specific recreation sites in this segment and explained why impacts would be below the level of significance. As conditioned, no significant impacts to recreation are expected in connection with PSE's proposal, and the City's codes and requirements adequately mitigate any expected impacts.

I. Historic and Cultural Resources

The Final EIS disclosed that (1) there are no known cultural, historic, or archeological resources at the substation site or along the transmission route; (2) there are some potential historic resources (e.g., the Eastside Transmission System), which are eligible for listing but would require an eligibility determination by the Washington State Department of Archaeology and Historic Preservation (DAHP); and (3) during construction, previously unidentified resources may be discovered.

PSE has prepared a historic property inventory.[27] The Conditions of Approval identified below require that PSE consult with DAHP, affected Tribes, King County Historic Preservation Program (KCHPP), and other appropriate stakeholders prior to construction and develop resource-specific mitigation measures. PSE is also required to consult with these stakeholders if a protected historic, cultural, or archaeological resource is identified during construction.

The Conditions of Approval require PSE to develop mitigation measures specific to those resources during consultation with DAHP, affected Tribes, and any other appropriate stakeholders. The Conditions of Approval also require that a final determination and mitigation measures report shall be submitted to the City of Bellevue to the extent allowed by law. If no impacts to historic or cultural resources are identified, then no mitigation is necessary.

J. Environmental Health – Electric and Magnetic Fields (EMF)

Section 4.8 of the Final EIS disclosed that all parts of the Energize Eastside project would have associated magnetic fields during operation that would vary depending on the pole type and electrical load. Operation of the proposed transmission lines would result in a decrease of magnetic field levels for all segments and options. There are no known health effects from power frequency EMF. For all proposed segments and options analyzed in the Final EIS, the calculated magnetic field levels would be well below reference guidelines. Therefore, under PSE's proposed alignment, impacts would be less-than-significant.

K. Environmental Health – Noise

As described in the Final EIS, noise impacts will be below the level of significance and addressed through regulatory requirements. As discussed above in Section V.A, electrical substations are exempt from the maximum permissible noise levels established in Chapter 173-60 of the WAC, but PSE's site plans include noise attenuation measures to maintain noise levels at the nearest receptors within 5 dBA of existing ambient noise levels. Other potential noise impacts, including construction noise, will be effectively mitigated through compliance with the critical areas regulations and the Noise Control Code, Chapter 9.18 BCC.

[27] Letter from Brad Strauch, PSE Program Manager, to Heidi Bedwell, City of Bellevue Environmental Planning Manager, dated December 13, 2018. PSE's December 13, 2018 letter (PSE 12-13-18) is included in the DSD official file for Permit No. 17-120556-LB.

L. Economics

As described in the Final EIS, mitigation for economic impacts from a project is not required under SEPA.

M. Earth Resources

Section 4.11 of the Final EIS has a robust discussion of Earth Resources and concluded that potential impacts would be less-than-significant. In addition, PSE has submitted the July 11, 2017 Revised Targeted Geologic Hazard Evaluation, prepared by GeoEngineers; the September 21, 2018 Memorandum re Geologic Hazards, prepared by GeoEngineers; and the September 14, 2018 Memorandum re Landslide Deposits, prepared by GeoEngineers. Each of these reports is included in Attachment I to this Staff Report.

No significant adverse impacts to earth resources are expected, and the Conditions of Approval identified below in Section X adequately mitigate expected impacts to earth resources.

N. Energy and Natural Resources

As described in the Final EIS, the Project would not affect the generation or consumption of energy, and any potential impacts to natural resources are not considered a significant impact.

O. Transportation

As described in the Final EIS, transportation impacts would be below the level of significance and addressed through regulatory requirements. As discussed above in Section V.D and below in the related Conditions of Approval, the City's codes, standards, and requirements adequately mitigate any expected impacts to Transportation.

P. Public Services and Utilities

As described in the Phase 1 Draft EIS and Final EIS, the Energize Eastside project would not significantly increase the demand for public services, or significantly hinder the delivery of services. Existing services are also adequate to address impacts from the Project. Therefore, no significant impacts to public services are expected, and the City's codes and requirements adequately mitigate any expected impacts to public services.

As described in the Phase 1 Draft EIS and Final EIS, the Energize Eastside project would not significantly increase the demand for utilities, or significantly affect utility operations, except with regard to electrical reliability, which will be improved by the Project. Storm drainage is discussed in Section V.C above; no significant adverse impacts to other utilities are expected; and the City's codes and requirements adequately mitigate any expected impacts to utilities.

VII. PUBLIC COMMENT

PSE's community outreach efforts regarding the construction of a new transmission line to connect the Talbot Hill and Lakeside substations, including the proposed Richards Creek substation adjacent to the Lakeside substation, began well before the CUP application was submitted. Consistent with the requirements of the LUC, public engagement regarding the specific proposal has continued throughout the CUP review process. All comments received by the City during the land use process are included in the DSD official file for Permit No. 17-120556-LB. Meetings held prior to permit application are documented in PSE's Alternative Siting Analysis (Attachment B to this Staff Report). Comments received during the EIS process, and response to those comments, are appended to the Final EIS as required by SEPA.

A. Public Noticing Requirements per LUC 20.35.120:

Application Date: September 8, 2017
Notice of Application: October 19, 2017
Minimum Comment Period: November 2, 2017
Promoted by:

- Weekly Permit Bulletin sent to properties within 500 feet of properties abutting the proposed transmission line and substation
- Weekly Permit Bulletin Webpage https://development.bellevuewa.gov/zoning-and-land-use/public-notices-and-participation/past-bulletins
- Permitting Webpage https://development.bellevuewa.gov/zoning-and-land-use/public-notices-and-participation/energize-eastside-updates
- Information signs along the route and substation (12 total signs)

B. Public Meetings Required by LUC:

Public meeting (required per LUC 20.35.300):
Date: November 14, 2017
Location: South Bellevue Community Center Community Room
Purpose: Project overview and the land use process
Promoted by: Weekly Permit Bulletin, Webpage, Direct Mailer
Number of attendees: approximately 60

Public meeting (required per LUC 20.20.255):
Date: September 6, 2018
Location: Bellevue City Hall
Purpose: Project overview and how to participate in a public hearing
Promoted by: Weekly Permit Bulletin, Webpage, Direct Mailer
Number of Attendees: approximately 20

C. Questions and Responses:

Public notice of the application for PSE's CUP and CALUP permits was published on October 19, 2017. During the land use process, the City has received written comment from about 100 individuals, which includes comments from citizens, organizations (e.g., Coalition of Eastside Neighborhoods for Sensible Energy (CENSE) and Citizens for Sane Eastside Energy (CSEE)), agencies (King County Wastewater Treatment

Division), and tribes (Muckleshoot Indian Tribe). A summary of the comments related to PSE's proposal is provided below.

In many cases, similar comments were made by more than one person. In those cases, comments are paraphrased and consolidated into one question (issue) and the questions have only one response. Comments were received primarily via email, with several commenters submitting supplemental material as attachments. Numerous emails were submitted with the same material as a form letter, or as the form letter with additional modifications. Comments were also provided on forms that were available at the November 14, 2017 public meeting, although no public comment testimony was taken at that meeting.

A selection of public comments received between the date of application and publication of this Staff Report are included in the below summary. Some individuals submitted comments on multiple occasions. Other comments raised purely legal arguments regarding PSE's phased construction, or the adequacy of the Final EIS, or argued that the City had failed to comply with its applicable land use processes (i.e., Process I, LUC 20.35.100 to 20.35.150, and Process II, LUC 20.35.200 to 20.35.250) in connection with processing PSE's permit applications. Copies of all the comments received during the land use process are included in the DSD official file for Permit No. 17-120556-LB.

With the exception of the agency and tribal comments, all of the comments received voiced opposition to PSE's proposal or the Energize Eastside project in general; opposition was stated either explicitly (e.g., "I oppose this project and it should not be approved") or implicitly (based on the content of the specific comment).

Table VII-1. Questions and Responses

Question/Theme	Comment Issue Summary	Response
Questions Related to Project Need:	PSE's Project would not increase reliability because the transmission problem it proposes to solve has not been demonstrated to exist, or can be solved with existing resources that PSE controls.	The City is aware of a number of questions regarding the need for the Energize Eastside project. These are discussed individually in the following responses.
[Project need continued]	WUTC is evaluating the need for the Energize Eastside project in PSE IRP Docket UE-160918, and the City should take that process into account. [Note comment letters were received for this permit review while WUTC review was occurring, but WUTC review is now complete.]	The City is aware that PSE's 2017 IRP was acknowledged by WUTC in May 2018 (as revised June 2018), and the WUTC acknowledgement specifically comments on PSE's limited disclosure of information regarding the need for the Project and response to public comment on the Energize Eastside project. Nevertheless, the WUTC stated that PSE "*complied with the letter of the law in Chapter 8 where it provided a history of its Needs Assessment Reports*." Further, the City of Bellevue has a prescribed set of criteria for approval of electrical utility facilities that differ from the WUTC mandate. The analysis in this Staff Report focuses on those criteria, and City policies supporting those criteria.
[Project need continued]	WUTC failed to protect Eastside Cities from unnecessary costs by not requiring PSE to better demonstrate the need for the Project, placing the burden on the Cities.	The City of Bellevue has a prescribed set of criteria for approval of electrical utility facilities that differ from the WUTC mandate. The analysis in this Staff Report focuses on those criteria, and City policies supporting those criteria.
[Project need continued]	Energy demand growth is not likely to be as great as PSE has projected. Electrical demand has been flat in recent years, not growing. An alternative method for estimating growth of electrical demand on the Eastside should be evaluated.	The growth estimates provided by PSE are based on PSE customer data and regional growth estimates by PSRC. The City is aware that PSE growth estimates have historically overestimated overall demand. First, overall demand can remain constant even as peak demand grows, due to conservation during off peak periods. In addition, the estimate suggested in some

		comments of using the regional average used by the Western Electricity Coordinating Council (WECC) (0.5%) is lower than both population and employment growth rates projected by PSRC for the Eastside area, and therefore may be too low. In June 2018, PSE notified the City of Bellevue that the actual peak demand in the summer of 2017 was equal to the peak demand they had projected for summer 2018, and warned that during peak summer demand periods, CAPs would be in place that include intentional load shedding (rolling blackouts) for Eastside customers (PSE 6-8-18). Following a request for additional information from the City, PSE explained that it did not perform any analysis on the electrical loads for the August 2017 dates, but increased air conditioning was a likely contributor (10-26-18). PSE's planning-level modeling found that both summer and winter peak customer load were driving the need for additional transmission capacity. Additional information regarding PSE's determination of operational need is discussed below in **Section VIII.C.3** of this Staff Report in connection with Electrical Utility Facilities Decision Criteria LUC 20.20.255.E.3.
[Project need continued]	PSE failed to respond to City requests for additional data supporting its statement in June 2018 that in 2017, summer peak loads had exceeded levels projected for summer 2018 in the Eastside Needs Analysis.	PSE did provide additional information clarifying specifically which peak load projection the June 2018 letter referred to, dates of the peak loads, and temperatures during the peak load period (see PSE 10-26-18). While providing some of the requested information, PSE also noted that it does not have some of the specific data requested, but provided the information that was relevant to the decision to put in place the contingencies that could lead to load shedding.

[Project need continued]	Contrary to PSE's statement that the "backbone of the system has not been upgraded in 50 years," the local transmission grid has been upgraded several times since this transmission line proposal was included in the Comprehensive Plan, providing adequate capacity for community needs.	The City is aware that there have been upgrades and additional 115 kV transmission lines built elsewhere in the Eastside since the time the possible need for this 230 kV transmission line was identified in the Comprehensive plan. PSE's statement refers to the central location of the transmission lines under review here and the fact that they remain 115 kV lines. This may be an overstatement, but this statement alone is not a significant factor in determining the need for the Project. Evaluation of the need for the Project has taken all transmission system changes and improvements into account.
[Project need continued]	PSE's motive for the Project is profit for a foreign owner/parent company. The Project is intended to generate revenue and does not have the region's best interests in mind.	The City does not regulate projects based on the motives of the applicant.
[Project need continued]	PSE's model used flawed assumptions by employing winter-time load factors combined with lower, summer-time capacity factors. PSE also ignored the possibility of "voltage collapse", which would cause widespread blackouts at the level of electrical load modeled, calling into question the accuracy of the model results.	The City hired Utility System Efficiencies, Inc. (USE) to evaluate scenarios independently. USE used summer ratings with summer loads and winter ratings with winter loads, and confirmed that there would be violations (overloads) in both heavy winter and heavy summer scenarios (see USE 2015). Voltage collapse was not identified as an issue in this independent analysis of the system.
[Project need continued]	The needs analysis used a flawed assumption regarding the amount of power flowing to Canada.	For PSE's needs assessment, PSE relied on ColumbiaGrid's determination that the 1,500 megawatt (MW) flow should be considered a firm commitment and was therefore required to be in its model. The City hired USE to evaluate scenarios independently, including ones that did not make these assumptions. The June 2018 disclosure that summer peak customer load in 2017 reached a level where CAPs are required, also indicates that the question of flows to Canada may be moot (see USE 2015; PSE 6-8-18; PSE 10-26-18).

[Project need continued]	The need analysis used flawed assumptions regarding PSE power generation during cold weather events.	The City is aware of the assumptions that were used in PSE's needs assessment. The Quanta Eastside Needs Assessment Report and Quanta Eastside Supplemental Needs Assessment Report indicated that the reason power generation was lowered was to facilitate south to north flow across the Norther Intertie, as indicated by ColumbiaGrid. USE 2015 also evaluated scenarios assuming PSE's power generation was running and concluded there would still be a need for the capacity improvement.
[Project need continued]	PSE's record on other aspects of its business suggest they should not be trusted. Examples include PSE's recent pipeline explosion in Greenwood and building without permits in Tacoma.	The City is aware of the examples cited. The City has worked diligently to obtain accurate and verifiable information regarding the Energize Eastside project and recognizes its responsibility to ensure compliance with all regulatory requirements within its authority.
[Project need continued]	An alternative needs analysis found that there was only one deficiency when 1,500 MW flows to Canada were eliminated.	The USE 2015 analysis did find that most of the problems identified by PSE planners would be eliminated in the Heavy Winter Scenario if the flows to Canada were curtailed, but also found that one transformer would be at risk, even if the Canadian flows were eliminated.
[Project need continued]	If ColumbiaGrid assumes that 1,680 MW of power supply from PSE generators would be running during a peak winter event when it does its modeling, why does PSE assume they would be off?	The transmission capacity deficiency identified by PSE could result in violations of the reliability standards, regardless of whether these generators were considered to be "on" or not. Stantec reviewed the results showing there were cases in which, even with these plants set as "on" in the model, there were still overloads in the Eastside, indicating that those overloads are a problem local to the Eastside (see Stantec 2015).
[Project need continued]	Assuming the flows to Canada are not required and would not be allowed if they endangered the grid, rolling blackouts are not likely to occur if the Project is not built, because there are ways for PSE to avoid	PSE's consultants found that, regardless of whether its generators were considered to be "on" or not, the model showed there would still be overloads in the Eastside that would require placing portions of the Eastside at risk for rolling blackouts, unless a transmission capacity improvement was made.

	them, including using local, 115 kV gas-fired plants owned by PSE.	
[Project need continued]	Growth in electrical demand will primarily be generated by growth and development in non-residential zones outside of the residential zones through which the majority of the Project would be built, in contradiction to Bellevue Land Use Code 20.20.255.G.	It is correct that the majority of the population and job growth expected within the City of Bellevue is planned and expected to occur outside of residential zones, according to the Bellevue Comprehensive Plan. However, the Project will protect reliability for the entire Eastside, the majority of which is residentially zoned and which includes residential zones in Bellevue. Compliance with the specific applicable criteria in LUC 20.20.255.G is analyzed throughout this Staff Report.
Questions Related to Potential Alternatives:	Better alternatives are available that are less expensive, safer, and/or more reliable. The City should require PSE to pursue other alternatives, such as batteries, solar, and other non-wire alternatives. These alternatives were not adequately evaluated as part of this Project.	The City has a duty to review a project as proposed by the applicant, in this case PSE. The City can only decide if the proposed Project is consistent with City rules and regulations. While the City did review many of the alternatives described in comments in the Phase 1 Draft EIS, it cannot require PSE to build an alternative that PSE does not see as feasible.
[Alternatives continued]	The Seattle City Light (SCL) transmission line could be "looped in" instead of building a new transmission line, and could be accessed through an Open Access Transmission Tariff (OATT).	PSE determined that additional 230 kV transmission is needed, and this will mean rebuilding the SCL line and sharing it, if used. SCL also indicated that it is not required to file a tariff (OATT) and expects to need the capacity on its line in the future.
[Alternatives continued]	What battery technology was considered by PSE in response to Bellevue Land Use Code 20.20.255.D.3? What was the rationale for the type and size of batteries considered?	The Alternative Siting Analysis included as Attachment B to this Staff Report demonstrates that PSE relied primarily on the Strategen report (Eastside System Energy Storage Alternatives Screenings Study), prepared for the Energize Eastside project in 2015 and updated in September 2018, to evaluate energy storage and battery alternatives. Generally, this Study looked at lithium-ion battery technology with a power rating of 328 MW to provide 2,338 MW hours to cover a period of 7.1 hours (the amount needed by 2021). Compliance with the Alternative Siting Analysis criteria in LUC 20.20.255.D.3 is analyzed in Section IV.A of this Staff Report.

Questions Related to Safety and Risk	The presence of the Olympic Pipeline system in the corridor presents a serious risk of catastrophic explosions and leaks caused by construction. PSE's safety record with gas pipelines heightens this concern, and commenters raised several questions about PSE's record.	The risks of accidents in the pipeline corridor is acknowledged and analyzed in the EIS. PSE and Olympic have worked together in the corridor for 40 years, and communicate regularly to coordinate activities related to pole replacement and other maintenance work. The risk assessment completed for the EIS indicates that there will be a very small increase in total risk during construction. The City is conscious of the need to ensure that PSE complies with safety requirements during construction and has exercised the authority available to a local permitting agency to ensure that every effort is made to minimize risk. See the discussion of Environmental Health-Pipeline Safety in Section VI.B and the Conditions of Approval regarding pipeline safety in Section X of this Staff Report.
	The presence of the Olympic Pipeline system in the corridor presents a serious risk of catastrophic explosions, fires, or leaks caused by natural forces, such as earthquakes, windstorms, and lightning.	Operational risks related to natural forces were analyzed in the EIS. Earthquakes and lightning strikes or wires downed by extreme weather events present risks of fault conditions or arcing from the transmission lines to the pipelines. The risk assessment included in the EIS determined that the Project is not expected to increase the risks of accidental release due to seismic activity or other natural forces, and that overall operational risks would decrease.
[safety/risk continued]	How long would it take for the Bellevue Fire Department to extinguish a fire if there were an accidental release from the Olympic Pipeline system that was ignited? What is the plan for the community, and how should people respond if a leak or explosion occurs?	Andy Adolfson, Deputy Chief of Operations for the City of Bellevue (WA) Fire Department provided a detailed response to questions about response times on October 23, 2018 in an email that is part of the record for this Project. The time it would take to extinguish a fire would depend on the scale of the release, but all fire trucks are equipped with a limited amount of foam concentrate for suppressing petroleum fires. The first priority would be to control or contain the spread of the fire, then work to extinguish it. Additional support could be provided by nearby fire departments, including

		Renton and Seattle. People who see, hear, or smell a release from a pipeline should move away quickly and call 911. Additional details are provided in the response from the Deputy Chief.
[safety/risk continued]	Concerns about risks specifically to Chestnut Hill Academy and Tyee Middle School – both from the Olympic Pipeline system and electromagnetic field (EMF) exposure from the transmission line, as well as from equipment at the new substation (for Chestnut Hill).	Regarding pipeline safety risks, risk during construction is discussed above; risk around schools can be reduced by scheduling construction near those facilities outside of the hours of school activities. Extensive health studies have not found a causal link between adverse health effects and EMF from electrical transmission lines. See Conditions of Approval regarding pipeline safety in Section X of this Staff Report.
[safety/risk continued]	More involvement from BP in project planning is needed to ensure safety. They have not attended public meetings.	The Partner Cities and the EIS Consultant Team contacted Olympic during the development of the EIS and provided an opportunity to comment during the EIS process. In addition, PSE has worked with Olympic directly. Neither the City of Bellevue nor PSE has the ability to require Olympic to attend public meetings. Olympic did provide information during the EIS process. See Section VI.B of this Staff Report for discussion of Environmental Health-Pipeline Safety, and see Conditions of Approval regarding pipeline safety in Section X.
[safety/risk continued]	EMF Risk. Commenters cited studies from the World Health Organization (WHO), National Cancer Institute, International Agency for Research on Cancer (IARC), and European Commission Scientific Committee on Emerging and Newly Identified Health Risks, noting potential EMF-related health effects (especially leukemia). Commenters also expressed concern about children being more susceptible and about potential exposure at Tyee Middle School.	The IARC does classify Extremely Low Frequency (ELF)-EMF as "possibly carcinogenic to humans" based on epidemiological studies. However, extensive health studies have not found a causal link between adverse health effects and ELF-EMF from electrical transmission lines. The 2011 IARC and WHO study cited by some commenters evaluated the possible association between the types of exposure from radiofrequency EMF from the use of wireless phones, not from ELF-EMF. Because there is no known causal link, there is no established EMF exposure limit in the

		U.S., other than workplace limits, which are far higher than any expected exposure at schools or other sites along the transmission corridor.
[safety/risk continued]	The Project would increase the risk of damage to pipelines if a line were to fall, as has occurred on this transmission corridor in the past.	PSE was asked about records of downed transmission lines, and PSE indicated that its records show falling trees and structural cross-arm failure were the causes. PSE's proposal is not likely to increase trees falling on the lines, and the proposed steel structures are expected to be stronger than the existing wooden ones and less prone to failure.
[safety/risk continued]	The taller poles would increase the risk of a pole falling on top of adjacent homes, with an increased potential for property damage and loss of life. Numerous homes are within 130 feet of the proposed pole locations. It is a real consideration in the Pacific NW, from a seismic event or landslide.	Transmission poles historically have not been toppled by earthquakes, regardless of height. Design standards required for transmission poles are the same for any height pole and make it extremely unlikely that poles would fall during a seismic event. Please see section VI.M, Earth Resources, for additional discussion of the Final EIS analysis regarding Earth Resources.
Questions Related to Process:	Public Meeting Logistics and Format. Some commenters had questions about the format of the public meeting (prior to the meeting), as well as how potentially affected property owners would be notified. One commenter stated that the November 14, 2017, meeting format only allowed for one-way communication from the City (and PSE) to the residents; more public dialog would have been helpful and beneficial.	The meeting format and notice requirements are specified in the City's Land Use Code. A meeting on September 6, 2018 provided opportunity for public dialogue as well as written comment.
[process continued]	Several commenters urged the City of Bellevue to reject the proposed Project because they believed that would best protect the interests of its residents, rather than promoting the business interests of PSE and its owners.	In making its decision on the Project, the City will weigh the interests of all of its citizens, including economic as well as environmental considerations, by applying the criteria and standards in the Land Use Code and SEPA regulations.
[process continued]	Comments on the EIS. Several commenters asked if their previous comments on the EIS	The EIS is part of the record for this permit process and the EIS has been incorporated by reference under the

	were being incorporated into the permit commenting process, or specifically asked that their EIS comments be carried over to this phase of the process. Some stated that their previous comments on the EIS had not been adequately addressed and that the permits should not be issued until comments and concerns were adequately addressed.	terms of BCC 22.02.020 and WAC 197-11-635. Comments received on the EIS that were submitted during the applicable comment periods are included in the Final EIS consistent with SEPA. The City considers the responses to comments that were provided in the Final EIS as adequate for SEPA purposes. The City has complied with its land use process in processing PSE's permit applications.
[process continued]	Permit Materials and Schedule. One commenter asked if the permit application materials were finalized as of November 2017 (or if any updates would be available), as well as associated schedule dates for future actions.	The City created a specific webpage on the City's website that contains information regarding PSE Permit Application Nos. 17-120556-LB and 17-120557-LO. Information included on the webpage included: Ongoing Permit Status; Permit Plans and Reports; How to Participate; Notices of Public Meeting and Hearings; and Information regarding the Final EIS.
Questions Related to Property Access:	Several commenters requested that site-specific property access be maintained during construction, such as to individual driveways or local roadways. Some of these included requests for direct coordination with PSE.	Site access will be maintained during construction. There may be brief times when access will need to be limited for safety purposes. PSE is coordinating directly with property owners along the corridor and will ensure that access for first responders is maintained.
Questions Related to Public Trail Access:	One commenter requested that construction/ truck access be avoided on the public pipeline trail during the wet winter months. Truck travel during wet conditions creates ruts that persist and make public trail access difficult.	A restriction on winter construction should not be needed except where recommended for critical areas. All access points will either be via existing improved roads, or temporary roads that will be improved with gravel to accommodate large trucks. Once installation is complete, PSE will be required to restore all temporary access areas. If an access road affects a trail on City-owned land, PSE will be required to coordinate any access restrictions with the Bellevue Parks Department.
Questions Related to Tree Canopy:	The amount of tree removal proposed is not consistent with City policy to increase tree canopy. Mitigation for tree removal for the transmission line and the substation should provide comparable ecosystem services (such as carbon sequestration, oxygen	The City is aware of the concerns listed regarding tree canopy loss. The City has policies to preserve tree canopy generally, and PSE has made and continues to make efforts to limit the amount of tree removal necessary as a result of its proposal. Mitigation for tree removal is required in critical areas and buffers areas

	production, air quality benefits), indirect benefits (such as mental and physical health), and the quality of the tree canopy as well as the quantity.	and will be provided. Mitigation will also be required for tree removal from public right-of-way or other public lands. PSE will also be required to submit a final Tree Replacement plan as part of the required clearing and grading permits consistent with Attachment E (Vegetation Management Plan) to this Staff Report. See Section VI.A of this Staff Report for a discussion of tree removal and mitigation measures, and see the Conditions of Approval in Section X of this Staff Report for information regarding the specific mitigation measures addressing tree removal in critical areas and non-critical areas.
Questions Related to Noise Pollution	One commenter expressed concern about noise pollution from new transmission lines.	Noise from the lines in nearby residential environments will be virtually the same as existing noise levels, and well below the limits required by local noise regulations.
Questions Related to Ratepayer Funds and Cost	The Project as proposed is unnecessary and wasteful of ratepayer funds. There are less costly ways to enhance the reliability and resiliency of the Eastside power grid.	The City of Bellevue does not establish rates or evaluate whether there are less costly means of accomplishing a project. It is the responsibility of the WUTC to determine if the cost of electrical upgrades is appropriate.
Questions Related to Property Value	Property values will decrease because of the proximity to taller poles and resulting EMF exposure.	While some studies have shown that a new transmission line can adversely affect property values, economic analysis for the EIS did not find studies that indicated a negative effect on property values due to the replacement of lower voltage with higher voltage transmission lines in an existing utility corridor.
Questions Related to Aesthetics and Views	The new poles will destroy views, especially in areas like Coal Creek Parkway and the Somerset and Newport Hills neighborhoods (as well as others). Several commenters stated that Bellevue is supposed to be a "city in a park," and that the aesthetic impacts of the Project (pole type and size, tree removal) are inconsistent with that stated ideal.	PSE's proposal will likely affect private views for some residents of Somerset uphill of the existing transmission line. For residents adjacent to the lines, taller poles may also remove obstructions to private views. No scenic views from parks or designated view corridors are expected to be impacted. Because the corridor already contains transmission lines, the proposal is not expected to alter the visual character of the neighborhoods it passes through, with the exception of an 0.8 area in the Somerset neighborhood that has

		developed a unique visual character due to private covenants. The unavoidable significant aesthetic and scenic resources impacts in Somerset are discussed in greater detail in the SEPA section and decision criteria analysis sections contained in Sections IV and VIII of this Staff Report. Private views in the City are not protected through government regulation or policy.
Questions Related to Inconsistency with City of Bellevue Land Use Code and Comp Plan	The Project is inconsistent with the Bellevue Land Use Code and Comprehensive Plan in that single-family homes and the neighborhood should be protected from the encroachment of more intense uses. In addition, the Project design contradicts the intended character of the neighborhood.	Transmission lines are an allowed and expected use in residential zones, and the proposal is consistent with applicable Comprehensive Plan policies, as discussed in Section VIII.D.1 of this Staff Report (see also Attachment G [Comprehensive Plan Policy Analysis] to the Staff Report). The proposal meets the requirements of the Land Use Code, including LUC 20.20.255, as discussed throughout this Staff Report.
Questions Related to Mitigation for Somerset	Given the higher degree of aesthetic impacts on views in the Somerset neighborhood, mitigation should be required – either run the line along a different corridor, or underground the transmission line (which would likely require a different corridor given the presence of the Olympic Pipeline system).	Four routes were considered for the South Bellevue Segment, one of which would have left the existing infrastructure in place, and two of which would have resulted in continued use of H-frame poles that would have only been 5 to 15 feet taller than the existing infrastructure. All of the option routes traverse residential land use districts, but the existing corridor route minimizes impacts associated views, tree removal, and pipeline interaction as compared to establishing a new corridor for the Project. One possible mitigation measure identified during the environmental review process was to select an option that would allow for shorter poles that are more similar to the existing 115 kV transmission line. This option was considered for the Somerset neighborhood but was not required for the reasons discussed in Section VI.C (Scenic Resources/Visual Impacts) and in Section VIII of this Staff Report.

		Mitigation measures are required to minimize the impact to surrounding neighborhoods. For portions of the transmission line where the poles will extend above the horizon for a large number of adjacent viewers, PSE will be required to adjust pole types and color to limit visual impacts. Specifically, to reduce aesthetic impacts to the surrounding environment and reduce contrast with the surrounding environment, PSE shall implement proposed pole finishes consistent with the recommendations found in Attachment J (Pole Finishes Report City of Bellevue (South)). Undergrounding the transmission line is not proposed because of cost and feasibility considerations. For further discussion of the cost and feasibility issues considered with respect to undergrounding, see Section VI.C of this Staff Report.
Agency/Tribal Coordination and Request for Information	The King County Wastewater Treatment Division (WTD) requested that the City submit construction drawings, especially in relation to two WTD project sites in the study area (the Coal Creek Trunk Line and the Coal Creek Siphon and Trunk Parallel). A map was included showing the specific areas of concern.	Potential impacts to utilities were described in the Phase 1 Draft EIS, which found that impacts could be adequately mitigated, and no significant impacts are expected. PSE will coordinate with King County WTD where PSE's proposed alignment is near existing or planned facilities. All potentially affected utilities must be shown on permit application plans, and conflicts can be addressed through the permit process. Information provided to PSE from King County will be utilized to avoid conflicts with existing and planned facilities.
[coordination continued]	The Muckleshoot Tribe requested that final copies of mitigation plans be submitted for review (specifically, for the East Creek tributary culvert/stream realignment project). They commented that the draft plans as presented in the Critical Areas Report were incomplete, and requested additional information on tree survey results, culvert design, sediment data, and sediment	PSE has provided a plan that has been reviewed and revised in response to requests over the course of the land use process. The EIS is considered and informs the City's permit review process, and comments submitted on the EIS during the applicable comment periods are included in the Final EIS consistent with SEPA. The proposed mitigation plan was available for the Final EIS, but it has been refined to address the comments from the Tribe.

	transport analysis. They also asked that their previous comments on the EIS be carried forward to the permitting stage.	
Other Questions	One commenter asked how much electricity would be needed for Sound Transit's Link light rail project on the Eastside, and if it would require energy from the Richards Creek substation.	The Energize Eastside project will serve the entire Eastside. It is beyond the scope of this permit analysis to look at individual projects that would be served by the proposed transmission lines.
[other/misc. continued]	Why was the Bellevue Segment split into two permits (Bellevue North and Bellevue South) rather being permitted in totality? Would it be functional if only one segment were permitted without the other? Would there be undisclosed risks or impacts as a result of only one segment being permitted?	PSE has chosen to construct the Energize Eastside project in phases. The City of Bellevue, as one of the jurisdictions with permitting authority over this multi-jurisdictional Project, processes the permit applications that it receives from PSE consistent with the City's LUC and other applicable codes and standards. The south segment of the Project provides additional capacity that addresses the Project need and could function whether or not the north segment is built. The north segment would provide redundancy in the supply of 230 kV power to the substation. As discussed above in Section VI of this Staff Report, the environmental review in the Final EIS was not limited to a segment or portion of the Energize Eastside project. Instead, the Final EIS presented a comprehensive environmental assessment of the entire Project, including a full analysis of potential impacts and cumulative impacts associated with the construction and operation of PSE's proposed alignment.
[other/misc. continued]	Mailed public notices were not distributed widely enough. The City did not provide adequate time for the public to review the Final EIS.	The EIS was prepared according to the City's adopted SEPA rules, including both the amount of notification and the duration of comment periods.
Stormwater	The Project site is an industrial site with extensive use of galvanized materials containing zinc. The Project does not adequately address water quality issues,	PSE's proposal complies with all City requirements for treatment of runoff. Some poles could be zinc coated to reduce aesthetic impacts, although most will not be because PSE prefers Corten-type finish. In any case,

	including enhanced treatment for zinc, or meet other stormwater requirements.	the proposal is not expected to result in large amounts of zinc reaching surface waters. No adverse impacts to water quality are expected.
Wetlands	This Project requires a Section 404 permit and a Section 401 Water Quality Certification. Thresholds for Section 404 and 401 permitting require analysis of the entire Project impacts, not just a partial phase in one municipality. The Project also requires a Hydraulic Project Approval.	The City of Bellevue does not administer Section 404 permits or Section 401 Certification. The EIS does analyze the entire corridor and may be used by state and federal agencies in their review of these permits and approvals. The Project must also comply with the State Hydraulic Code, which is beyond the jurisdiction of the City. The City will require evidence of receiving state and federal required approvals prior to construction. See Conditions of Approval in Section X of this Staff Report.
[wetlands continued]	The Project must fully mitigate the loss of Wetland D at the Richards Creek substation site. The Project must include monitoring of the wetland area south west of the new stream channel.	Mitigation will be provided as required by LUC 20.25H.105. See Conditions of Approval in Section X of this Staff Report.
Culvert and Stream Channel - Richards Creek 230 kV Substation	The new culvert and stream channel would increase peak flows to downstream systems, and the proposed culvert has a sediment trap within the structure. Comments suggested the sediment trap would be illegal, and also that the plans inadequately address stream functions.	The culvert and stream channel design is proposed as mitigation.
Conceptual Photo Simulations	The plan sheets show taller poles than shown in the conceptual photo simulations.	The photo simulations indicate all heights as approximate. The proposed poles are within the range of heights described in Chapter 2 of the Final EIS. It is acknowledged that pole heights shown on the transmission line site plans are greater than the simulations that were provided initially with the permit package. Revised and updated photo simulations are included as Attachment H to this Staff Report.

Plan Sheet Comments	The plan sheets show only one existing pole location where existing pole structures are H-poles. Sheet 5/25 shows three new high tension lines over I-90, with three new poles and a new line headed east extending off the plan sheet. This new line is not part of the Project proposal.	The transmission line site plans show a center point for each support structure to be removed or installed, and a single line indicating the conductors they support. The plan reviewers understand that the existing structures are generally H-frame structures made up of two or three poles. With regard the lines crossing I-90, it is correct that there is an additional line from the Richards Creek substation. The two 230 kV circuits and one 115 kV circuit will be borne on pairs of monopoles in this portion, with the 115 kV line heading east on the south side of I-90.
Impacts on Endangered Species	There is no final mitigation plan for impacts to wetlands and streams. The plan provided is missing important information that affects the impacts of the Project.	A preliminary mitigation plan was included with the Critical Areas Report, which is typical for projects with wetland impacts. A final plan is required prior to construction and must address any conditions required through permit review. See Conditions of Approval in Section X of this Staff Report.
Impacts on Endangered Species	The proposed stream reconfiguration proposed under the Energize Eastside project will likely reduce water quality and affect endangered species.	Compliance with Bellevue's critical areas regulations and stormwater management regulations is required and will ensure that the stream reconfiguration does not degrade water quality and therefore will not adversely affect endangered species that use the stream. See Conditions of Approval in Section X of this Staff Report.
Alternative Siting Analysis	PSE states that the proposed Energize Eastside corridor was chosen after extensive study. How can this be when PSE has still not produced any evidence that it has considered EIS comments from at least 2016 onwards? Why has PSE chosen a residential corridor rather than an industrial corridor for Energize Eastside? What will PSE do to mitigate the negative impact to the City of Bellevue view corridors?	PSE's Alternative Siting Analysis describes the process it used to arrive at the proposed Project configuration. This includes consideration of potential view, corrosion, displacement, and vegetation clearing impacts. There are no designated view corridors that would be impacted in the project area. For further information, see Attachment B (Alternative Siting Analysis) to this Staff Report and Section IV.A of the Staff Report.

VIII. APPLICABLE DECISION CRITERIA - FINDINGS AND CONCLUSIONS

Compliance with the following decision criteria of individual Land Use Code sections is described below.

Critical Areas Report Decision Criteria- LUC 20.25H.255
Critical Areas Land Use Permit – LUC 20.30P.140
Electrical Utility Facilities – LUC 20.20.255.E
Conditional Use Permit – LUC 20.30B.140

A. Critical Areas Report Decision Criteria- General Criteria LUC 20.25H.255

The Director may approve, or approve with modifications, the proposed modification where the applicant demonstrates:

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

Finding: As required per LUC 20.25H.105 and discussed in Section IV Part B [Consistency with Land Use Code and Zoning Requirements], the applicant has demonstrated through a Critical Areas Report that the proposed wetland enhancement as mitigation leads to levels of protection of critical area functions and values at least as protective as application of the regulations and standards of this code. The proposal has demonstrated a functional lift associated with the proposed enhancement work which will result in greater protection than the standard code application for wetland mitigation.

Enhancement actions will consist of removing/reducing the presence of nonnative plant species and installing a diverse native plant community. The wetlands will also be enhanced with a realigned stream channel, installation of large woody debris, removal of invasive vegetation, and installation of native vegetation. The stream realignment allows for the creation of more complex and higher quality riparian wetland and a buffer of substantial width along both sides of the stream, whereas the existing alignment is straight, borders a paved area, and is largely lined with reed canarygrass and bittersweet nightshade. As the Critical Areas Report notes wetland restoration and creation were considered for the property, but determined to be infeasible due to existing site conditions (most of the remaining vegetated area on-site is already wetland or stream) and the inability to appropriately buffer any new or restored wetland area. Existing wetland and wetland/stream buffers are degraded on the Richards Creek substation site and therefore provide ample opportunity for enhancement, the proposed mitigation strategy.
Refer to the Conditions of Approval regarding final mitigation and monitoring plans in Section X of this Staff Report.

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

Finding: A mitigation plan for all areas of temporary and permanent new disturbance is required to be submitted for review and approval by the City of Bellevue prior to issuance of the Clearing and Grading Permit. The mitigation plan shall include methods for

vegetation maintenance and monitoring and shall also include a maintenance and monitoring component for a period of not less than five years after any replanting effort within a critical area or critical area buffer. A monitoring report shall be submitted annually, and dead plant material shall be replaced during this maintenance and monitoring period.

As part of the Clearing and Grading Permit the applicant shall submit a cost estimate for the proposed planting materials and installation costs. An installation assurance device shall be provided to the City of Bellevue in the amount of 150% of the total cost prior to clearing and grading issuance. After the mitigation plans have been installed the city shall retain a maintenance assurance device in the amount of 20% of the total cost estimate for a minimum of five years. The maintenance surety shall be kept by the city until the performance objectives have been met. **Refer to the Conditions of Approval regarding final mitigation and monitoring plans in Section X of this Staff Report.**

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

Finding: In addition to the proposed wetland enhancement, the proposal includes culvert replacement associated with a small, perennial stream beneath the access driveway to the Richards Creek substation site. This includes realigning and enhancing the stream sections extending upstream and downstream of the crossing and enhancing the new stream buffer including associated wetland areas. Both the wetland enhancement and stream habitat improvement will enhance functions of the critical areas and critical area buffers off-site.

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

Finding: The project involves the replacement of an existing transmission line; therefore, no change in land use proposed. The proposed substation is located adjacent to an existing substation and other light industrial uses and non-residential development. PSE's proposal is anticipated by and included in Bellevue's Comprehensive Plan (see Attachment F [Map UT-7] to this Staff Report). The proposal is limited to the existing corridor, and the Project, as modified, is compatible with and responds to the uses and development that has been built up around the transmission line corridor for decades.

B. Critical Areas Land Use Permit Decision Criteria - LUC 20.30P.140

The Director may approve, or approve with modifications, an application for a CALUP if the proposal meets all of the following criteria:

1. The proposal obtains all other permits required by the Land Use Code.

Finding: PSE has applied for a CALUP and CUP. In addition, construction permits will be required, including but not limited to ROW permits, utility permits, and clearing and grading permits. PSE shall also submit approved State and Federal permits to the City

to demonstrate compliance with all regulatory requirements. Before any direct wetland impacts occur, PSE shall obtain the necessary state and federal authorizations. PSE shall provide the City of Bellevue copies of all required permits from the WDFW and the U.S. Army Corps of Engineers, including any requirements from the U.S. Fish and Wildlife Service and National Marine Fisheries Service prior to the City of Bellevue's pre-construction meeting. **Refer to the Conditions of Approval regarding final mitigation and monitoring plans in Section X of this Staff Report.**

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

Finding: The Project will utilize existing access points to minimize impacts on critical areas and critical area buffers. BMPs include plant replacement, scattering trimmed or removed tree debris, and chipping wood to reduce potential impacts to work areas. Removal of vegetation by hand and/or using limited access machinery will reduce potential impacts. PSE has designed the transmission line to locate poles in the general vicinity of existing impacts, limiting the number of new poles and minimizing vegetation removal with pole heights. Most poles will be direct imbed rather than constructed with foundations. Direct imbed pole technique minimizes ground disturbance and impacts to vegetation. Methods suggested for construction access and staging plans also demonstrate use of best available techniques for reducing impacts on critical area.

The final structure design for poles and other electrical equipment at proposed substation would comply with NESC 2017 as adopted by the UTC. To ensure the least impact on critical area and critical area buffer, the project geotechnical engineer shall certify that PSE has conducted geotechnical hazard evaluations for all proposed elements of the substation foundations, walls, and transmission poles, and that all geotechnical recommendations have been incorporated into project design. PSE is required to provide this required certification and supporting documentation to the City of Bellevue.

Furthermore, the geotechnical report provided to the City shall address all code requirements and provide a discussion of how the design meets or exceeds following:

- 2012 International Building Code (IBC), or as amended, parameters for short period spectral response acceleration (SS), 1-second period spectral response acceleration (S1), and Seismic Coefficients FA and FV presented in Table 2 of the geotechnical report
- Consistent with the project geotechnical engineer's recommendation, use soil input parameters for lateral load design that consider the effects of liquefaction through the application of p-multipliers for LPile parameters (LPile is a computer program used to analyze deep foundations under lateral loading).
- North of the proposed Richards Creek substation, reevaluate the lateral spreading risk to the proposed poles in this area once their final locations have been selected, to determine appropriate foundation dimensions.

- Where area subject to liquefaction are present, extend foundations below the loose to medium density liquefiable deposits into underlying dense, non-liquefiable soils.
- Reevaluate the axial capacity of the pole foundations and potential downdrag loads for poles in areas subject to liquefaction once final locations are selected, and consider these in the structural design.

For the life of the project, PSE shall develop a monitoring and maintenance program that includes inspection and reporting on the ability of the transmission line poles to resist seismic disturbances. As part of PSE's regular inspection of the poles, it shall monitor all poles for changes in conditions that could reduce the ability of the structures to resist seismic disturbances and then submit annual reporting to the City of Bellevue. If changes are identified during inspection and monitoring of conditions, PSE shall implement additional measures to reduce or minimize those impacts. **Refer to the Conditions of Approval regarding construction standards and Maintenance and Monitoring Plan requirements in Section X of this Staff Report.**

3. The proposal incorporates the performance standards of LUC 20.25H to the maximum extent applicable.

Finding: As discussed in Section IV of this Staff Report, PSE's proposal for a new or expanded utility facility is an allowed activity per LUC 20.25H.055 that meets the performance standards and additional provisions for the following:

Critical Areas – Streams	LUC 20.25H.080.A & 20.25H.080.B
Critical Areas – Wetlands	LUC 20.25H.100 & 20.25H.105
Critical Areas –Geologic Hazards	LUC 20.25H.125

4. The proposal will be served by adequate public facilities including street, fire protection, and utilities.

Finding: The proposed transmission lines will not impact any existing public facility service level. The Phase 1 Draft EIS and Final EIS concluded that the Energize Eastside project would not significantly increase the demand for public services, or significantly hinder the delivery of services. **Refer to Technical Reviews conducted by the Fire, Utilities, and Transportation in Section V of this Staff Report.**

5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210.

Finding: PSE has submitted a Mitigation Plan and a Critical Areas Report with its permit applications. Both are consistent with LUC 20.25H.210, and the information contained therein shall be reflected in the final Plans submitted under the clearing and grading permits. **Refer to the Conditions of Approval regarding the final Mitigation Plans requirements contained in Section X of this Staff Report.**

Mitigation plans shall also include a maintenance and monitoring component for a period of not less than 5 years after any replanting effort. A monitoring report shall be submitted annually, and dead plant material shall be replaced during this maintenance

and monitoring period. **Refer to the Conditions of Approval regarding performance standards and Maintenance and Monitoring Plan requirements in Section X of this Staff Report.**

6. The proposal complies with other applicable requirements of this code.

Finding: As discussed in Section IV of this Staff Report, PSE's proposal complies with all other applicable requirements of the Land Use Code.

C. Electrical Utility Facilities Decision Criteria – LUC 20.20.255.E

A. The proposal is consistent with PSE's System Plan.

Finding: PSE's proposal was first included in PSE's System Plan in 1993 and has remained part of PSE's System Plan since that time (see UT Element 2015). The System Plan states, *"[t]he 230 kV sources for the 115 kV system in northeast King County are primarily the Sammamish and Talbot Hill substations. The loads on the 230 - 115 kV transformers in these stations will be high enough to require new sources of transformation*." Additionally, the "*Lakeside 230 kV Substation project [now referred to as Energize Eastside] will rebuild two existing 115 kV lines to 230 kV between Sammamish and Lakeside [where PSE proposes the construction of the Richards Creek substation], and between Lakeside and Talbot Hill*." Therefore, the specific South Bellevue Segment proposal, which is part of the multi-jurisdictional Energize Eastside project, is anticipated by and consistent with the System Plan.

Further, the purpose of PSE's proposal is to address a transmission deficiency that PSE has identified, based on federal transmission planning requirements and planning studies that have identified operational deficiencies and to increase reliability. If left unaddressed, the deficiency identified by PSE could affect the transmission system's ability to supply reliable power to the Eastside. As part of the System Plan, the Energize Eastside project is needed to ensure that PSE can provide for peak electrical demand in the Eastside portion of PSE's service area, including Bellevue, surrounding cities, and a portion of King County, without endangering PSE equipment or adversely affecting portions of the electrical grid operated by others.

PSE also conducts planning required for compliance with state and federal regulations, and PSE has continued to examine the timing and need for the Project as anticipated by its System Plan. In further planning, the 2014 and 2015 Quanta Supplemental Eastside Needs Assessment Report prepared for PSE found that the Project would likely be needed as early as the winter of 2017–2018 or summer of 2018. More recently, in June 2018, PSE informed several Eastside cities that its peak customer demand projections, which were the basis for determining the need for the Energize Eastside project, had been exceeded in the summer of 2017 (PSE 6-8-18). Additional information regarding PSE's determination of operational need is discussed below in Section IX.B.3 in connection with Electrical Utility Facilities Decision Criteria LUC 20.20.255.E.3.

Finally, PSE's proposal, as identified in its System Plan, is anticipated by and included in Bellevue's Comprehensive Plan. PSE last aligned its System Plan

with the current Comprehensive Plan during the 2015 Comprehensive Plan Update ("10-Year Update"), and consistent with the Growth Management Act (GMA), the Energize Eastside project is part of the UT Element of the Comprehensive Plan's identification of new and expanded electrical facilities and the general locations of conceptual alignments of PSE's planned energy facilities (see Attachment F to this Staff Report [Map UT-7]). Thus, the City's Comprehensive Plan confirms and documents that the proposal is consist with PSE's System Plan.

II. The design, use, and operation of the electrical utility facility complies with applicable guidelines, rules, regulations, or statutes adopted by state law, or any agency or jurisdiction with authority.

Finding: All PSE facilities that are part of the Bulk Electric System (BES)[28] and the interconnected western system are planned and designed in accordance with the latest approved version of the North American Electrical Reliability Corporation (NERC) Reliability Standards, and the Western Electricity Coordinating Council (WECC) standards and reliability criteria. These standards set forth the performance expectations that affect how the transmission system is planned, operated, and maintained. NERC has been certified as the Electrical Reliability Organization by the Federal Energy Regulatory Commission pursuant to the Federal Power Act.

The NERC standards mandate that certain forecasts and studies be completed to determine if the system has sufficient capability to meet expected loads now and in the future. When completing transmission planning studies, contingencies are simulated to determine if the electric system meets the mandatory NERC performance requirements[29] for a given set of forecasted demand levels, generation configurations and levels, and multiple system component outages. PSE has complied with these planning requirements, which has led to PSE's determination of the need for the Energize Eastside project.

With respect to state law requirements, PSE designs, constructs, and operates its facilities consistent with the National Electric Safety Code (NESC) as required by Washington State law.

In addition to compliance with state and federal laws, PSE will comply with the City of Bellevue regulations identified and described in this Staff Report. Specifically, PSE's proposal is required to comply with the code requirements of LUC 20.20.255, which regulates proposals for new or expanding electrical utility facilities; the proposal's compliance with LUC 20.20.255 is discussed throughout this Staff Report. **Refer to Sections IV.A and VIII.C of this Staff Report for a**

[28] Defined as facilities 100 kV and above.

[29] The transmission planning standards that were in effect in 2012-2013 were: TPL-001-3, TPL-002-0b 2nd Rev (TPL-002-2b), TPL-003-0b 2nd Rev (TPL-003-2b), and TPL-004-2. TPL-001-3, TPL-002-2b, TPL-003-2b, and TPL-004-2 are being retired as they are replaced in their entirety by TPL-001-4. Enforcement of the new standards began January 1, 2015.

discussion of how PSE's proposal has met the applicable City of Bellevue Electrical Utilities Facilities LUC requirements.

III. The applicant shall demonstrate that an operational need exists that requires the location or expansion at the proposed site.

Finding: The stated purpose of the Energize Eastside project is to meet local demand growth and protect reliability in the Eastside of King County, roughly defined as extending from Redmond in the north to Renton in the south, between Lake Washington and Lake Sammamish, and including the City of Bellevue. The Project was identified in the City's Comprehensive Plan UT Element policies for non-City-managed utilities and is shown on Map UT-7 – New or Expanded Electrical Facilities (see Attachment F to this Staff Report). That figure shows a potential need to expand both the transmission line and the Lakeside substation, which are the subject matter of PSE's proposal in the CUP and CALUP applications.

Comprehensive Plan Policy UT-47 directs the City to defer to the serving utility, in this case PSE, regarding the implementation sequence of components of the utility's plan. PSE originally identified an operational need based on the capacity deficiency on the Eastside in 1993. Between 2012 and 2015, PSE and the City of Bellevue commissioned three separate studies confirming the need to address Eastside transmission capacity:

- Exponent 2012 (City of Bellevue);
- Quanta Eastside Needs Assessment Report (PSE); and
- Quanta Supplemental Eastside Needs Assessment Report (PSE).

The 2014 and 2015 Quanta Supplemental Eastside Needs Assessment Report found that the Project would likely be needed as early as the winter of 2017–2018 or summer of 2018. Specifically, PSE's planning studies showed that systemwide peak winter power demand levels above 5,162 MW, or systemwide peak summer power demand above 3,625 MW, under certain contingencies, would result in overloads on Eastside equipment, which could result in the use of CAPs and attendant load shedding (Tables 3-1 and 3-2 in Quanta Supplemental Eastside Needs Assessment Report). The planning studies identified a violation of mandatory performance requirements where the forecasted peak load level was 3,625 MW, and the 2015 Quanta Supplemental Needs Assessment Report forecasted that violations of planning standards due to peak load would occur in 2018.

In addition to the planning studies commissioned by PSE, the need for the Energize Eastside project identified by PSE was independently verified in the USE 2015 report prepared for the City of Bellevue by Utility System Efficiencies, Inc. The USE 2015 report stated the following:

> *Several hypothetical scenarios were studied as part of the Optional Technical Analysis (OTA). Each one showed overloads in the 2017/18 timeframe, indicating project need in order for PSE to meet federal regulatory requirements for system reliability. The OTA results showed that reducing the Eastside area growth from 2.4% to 1.5% per year in*

> *the period from winter 2013/14 to winter 2017/18 still resulted in project need. Reducing PSE's King County growth while keeping the Eastside growth the same similarly resulted in a project need. Turning on additional generation in the Puget Sound area also resulted in a project need.*

Furthermore, as part of the EIS analysis prepared for the Project, in 2015, Stantec Consulting Services Inc., an electrical system planning and engineering consultant, also reviewed PSE's analysis and determined that the approach to the needs assessment followed standard industry practice (see Stantec 2015). Therefore, the studies performed by PSE in 2013 and 2015, along with the USE 2015 study prepared for the City, confirmed that operational needs exist to improve reliability for Eastside communities and to supply the needed electrical capacity for anticipated growth and development on the Eastside.

In June 2018, PSE sent letters to several cities on the Eastside stating that their peak customer demand projections, which were the basis for determining the need for the Energize Eastside project, had been exceeded in the summer of 2017 (see PSE 6-8-18). PSE indicated that the systemwide peak customer load in the summer of 2017 reached the levels earlier predicted for summer of 2018, exceeding 3,625 MW. This occurred in early August of 2017, following a brief period of unusually high daytime and nighttime temperatures (PSE 9-21-18; PSE 10-26-18).

PSE did not perform any analysis on the electrical loads for the August 2017 dates, but PSE indicated that increased air conditioning was a likely contributor. (PSE 10-26-18). PSE also noted that Northwest Energy Efficiency Alliance's Residential Building Stock Assessment found that in Washington state, the percentage of single-family homes that had mechanical cooling equipment has increased from approximately 34% to 52% in less than a decade. This information on actual demand supports PSE's planning level modeling, which found that both summer and winter peak customer load were driving the need for additional transmission capacity. It also demonstrates the consistency of PSE's proposal with its System Plan, which has long anticipated this growth in demand.

The geographic location of the Energize Eastside project is directly related to the operational need, local demand growth, and reliability considerations that PSE has identified and that the Project is designed to address. Specifically, the Project is located between Redmond and Renton, the two points where the system can connect to 230 kV bulk power on the Eastside. While PSE explored other options for siting the Project, the operational need identified by PSE is to expand the capacity for transforming 230 kV power to 115 kV through multiple jurisdictions on the Eastside.

Based on its siting analysis, and consistent with the findings of the Phase 1 Draft EIS, PSE found that locating the Project within an existing right-of-way has fewer impacts than creating a new right-of-way corridor, as well as being the location that provides the least costly way to develop the Project. The Project is therefore proposed in the existing 115 kV corridor connecting the Talbot Hill substation to the Lakeside substation.

PSE has also chosen to construct the Energize Eastside project in phases and has applied for local permit approvals in the South Bellevue Segment of the Project, which includes upgrading 3.3 miles (the Bellevue portion) of existing 115 kV lines with 230 kV lines between the Lakeside substation and the southern city limits of Bellevue. PSE's analysis supported and demonstrated that operationally the Project must include 230 kV transmission lines connecting the Talbot Hill substation in the south to a new transformer in central Bellevue. The full buildout of the Energize Eastside project will include a similar connection from the Sammamish substation in the north to provide redundancy, but the south portion of the Project that is the subject of PSE's current proposal can function independently.

Finally, PSE's normal practice would be to have a 230 kV station co-located with the adjoining 115 kV station; however, due to topographic and environmental considerations at the Lakeside substation, expanding the station would be challenging. Therefore, PSE determined that placing the two stations on separate parcels was the most effective approach. Because the two yards have separate access points, they are required to have different names for operational and emergency purposes. The operational need demonstrated by PSE supports both the location of the proposed Richards Creek substation and the Project's location, including the South Bellevue Segment, within the existing right-of-way.

IV. The applicant shall demonstrate that the proposed electrical utility facility improves reliability to the customers served and reliability of the system as a whole, as certified by the applicant's licensed engineer.

Finding: As noted above in Sections VIII.C.1 and VIII.C.3, the purpose of PSE's proposal is to address a transmission deficiency identified by PSE. If left unaddressed, this deficiency could adversely affect the reliability of the transmission system serving all of Bellevue and other Eastside communities.

As discussed throughout this Staff Report, several studies were commissioned by PSE and the City of Bellevue to examine the need for the Project, including how system reliability would be affected if the Project was not built. These studies were reviewed and confirmed by Washington State licensed engineer Jens Nedrud, PSE's Manager of System Planning.[30]

V. LUC 20.20.255.5.a. For the proposals located on sensitive sites as referenced in [Map UT-7] of the Utility Element of the Comprehensive Plan, the applicant shall demonstrate compliance with the alternative siting analysis requirements of subsection D of this section.

5.a Finding: The Energize Eastside project is proposed on a route that is shown as a sensitive site on Map UT-7 of the UT Element of the Comprehensive Plan

[30] July 20, 2017 letter from PSE to Heidi Bedwell, Environmental Planning Manager, regarding Reliability Certification for the Energize Eastside 230-kV Project (PSE 7-20-17). The PSE 7-20-17 letter is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

(see Attachment F to this Staff Report). PSE provided a summary of its Alternative Siting Analysis, dated September 2017, which is attached hereto as Attachment B.

As explained in detail in Section IV.A.1 of this Staff Report, the Alternative Siting Analysis provided by PSE meets the requirements of LUC 20.20.255.D.

LUC 20.20.255.5.b. Where feasible, the preferred site alternative identified in subsection D.2.d of this section is located within the land use district requiring additional service and residential land use districts are avoided when the proposed new or expanded electrical utility facility serves a nonresidential land use district.

5.b Finding: The Energize Eastside project provides additional transmission capacity needed to accommodate exiting electrical demand and expected growth throughout the Eastside. Most of the population and employment growth in Bellevue to be served by the Project is expected to occur in non-residential zones and mixed-use zones. However, because transmission capacity must connect to the regional grid, it is not possible to construct the facility in a discrete zone or zones; the lines must cross several zones to reach the center of the Eastside, and the majority of the area it must cross is residentially zoned.

The portion of Bellevue that would be vulnerable to reduced electrical reliability if the Project is not built includes the area where the transmission lines and substation are proposed. PSE's South Bellevue Segment proposal, along with the multi-jurisdictional Energize Eastside project, will avoid new impacts to residential areas through its location in the existing utility transmission corridor. This location is anticipated by Map UT-7 and adheres to Comprehensive Plan Policy UT-98, which discourages the introduction of new aerial electric facilities in areas where none exist. Thus, the preferred Project site is located within districts that currently accommodate the corridor and require the service that the Project will provide.

The proposed transmission lines run through several residential and non-residential districts of Bellevue that will benefit directly from the Energize Eastside project. Improvements to reliability as a result of the Project will also benefit the entire City and other communities surrounding Bellevue, including both non-residential districts and residential districts.

Consistent with City policies on utility corridors, PSE's proposal makes use of an existing shared utility transmission corridor. By using an existing transmission line corridor that passes through residential areas, it is not feasible to avoid residential areas. In the Alternative Siting Analysis, routes passing through non-residential areas were considered as alternatives to building a portion of the new transmission line in the existing corridor where it passes through residential districts. This was examined specifically in the areas south of Lakeside substation. However, a study found that by having the line divert from the existing corridor, the Project could increase the potential for corrosion of the existing Olympic petroleum pipeline system that shares the corridor with the transmission

lines. Due to this safety consideration, PSE determined that keeping the transmission lines in the existing residential district route was preferable.

The new Richards Creek substation will be built in a non-residential district.

Consideration was given to avoiding residential districts consistent with Policy UT-67, which encourages consolidation of facilities in easements, even though the Project serves both residential and non-residential districts. Due to pipeline safety considerations, diverting the line off of the existing corridor in residential areas was determined to be less feasible that utilizing the existing corridor.

VI. The proposal shall provide mitigation sufficient to eliminate or minimize long-term impacts to properties located near an electrical utility facility.

Finding: As conditioned through the CUP and SEPA process, the mitigation proposed will minimize the long-term impacts to nearby properties. These include impacts related to visual impacts, tree and vegetation removal along PSE's proposed alignment, pipeline safety, historic and cultural resource protection, and other issues. **Refer to the discussions of mitigation measures, conditions and requirements contained in Sections III, IV, V, VI, VIII and X of this Staff Report.**

D. Conditional Use Decision Criteria – LUC 20.30B.140

1. The conditional use is consistent with the Comprehensive Plan.

Under the GMA, the City considers the location of existing and proposed utilities and potential utility corridors in land use planning, and PSE's proposal has been included in the Comprehensive Plan for many years (see Attachment F [Map UT-7]). The City must plan for the adequate provision of utilities consistent with the goals and objectives of its Comprehensive Plan, taking into consideration the public service obligation of the utility involved. (UT Element, p. 125.) As part of the City's land use planning for existing and proposed utilities, the Comprehensive Plan shows the general locations and conceptual alignments of the proposal in order to guide the conditional use review of transmission lines, routes, and substations (see Attachment F [Map UT-7]). Various policies in the Comprehensive Plan also recognize the planning and implementation of multi-jurisdictional utility facility additions and improvements such as the Energize Eastside project. (UT-18, UT-48, UT-72.)

The UT Element in the Comprehensive Plan is directly applicable to PSE's proposal. UT policies work in concert with the Land Use Element to ensure that the City will have adequate utilities to serve both existing development and future growth. (UT Element, p. 122.) While the Comprehensive Plan states that it is critically important to meet growing demand for utility services and provide reliability of the City's utilities systems, the Utilities Policies also recognize that it important to ensure that new and expanding utility facilities are sensitive to neighborhood character. (*Id.*, p. 139.)

Volume I of the Comprehensive Plan contains the General Policies, including the Utilities, Land Use, Urban Design, Economic Development, and Environment Policies, and was last updated in 2015. Volume II contains the Subarea Plans, including the Richards Valley, Factoria and Newport Hills Subarea Policies. Attachment G to this Staff Report provides a review of the proposal's consistency with the Comprehensive Plan policies and Subarea policies, and the analysis below explains why the proposal is consistent with the Comprehensive Plan.

Utilities (UT) Policies

Finding: Several UT policies call for planning and coordination to ensure reliable, sustainable, and quality service for the whole community. PSE has coordinated its system planning with the City and other agencies and is now proposing a project consistent with this system planning work and these policies. As discussed throughout this Staff Report, the location and conceptual alignment of the proposal in PSE's existing corridor is identified and included in the UT Element at Map UT-7 (see Attachment F to this Staff Report).

A recurring policy consideration in the UT Element is the necessity of reliable service that meets the needs of existing and future development. (see UT-1 (Manage utility systems effectively in order to provide reliable, sustainable, quality service), UT-45 (Coordinate with non-city utility providers to ensure planning for system growth consistent with the City's Comprehensive Plan and growth forecasts), UT-74 (Encourage system practices intended to minimize the number and duration of interruptions to customer service). Comprehensive Plan Policy UT-99 and the attendant discussion that accompanies this Policy explain this consideration in detail:

UT-99: Work with and encourage Puget Sound Energy to plan, site, build and maintain an electrical system that meets the needs of existing and future development, and provides highly reliable service for Bellevue customers.

Discussion: Providing highly reliable service is a critical expectation for the service provider, given the importance of reliable and uninterrupted electrical service for public safety and health, as well as convenience. Highly reliable service means there are few and infrequent outages, and when an unavoidable outage occurs it is of short duration and customers are frequently updated as to when power is likely to be restored. A highly reliable system will be designed, operated and maintained to keep pace with the expectations and needs of residents and businesses as well as evolving technologies and operating standards as they advance over time.

Consistent with UT-1, UT-45, UT-74, and UT-99, the stated purpose of the Energize Eastside project is to meet local demand growth and protect reliability in the Eastside of King County. PSE has described the need for the Project and its importance in helping to manage the utility system effectively. This stated need and purpose is consistent with and anticipated by UT Policies that require planning and coordination between the City and PSE to ensure reliable, sustainable, and quality service for the whole community. In addition,

Comprehensive Plan Policy UT-47 directs the City to defer to the serving utility regarding the implementation sequence of components of the utility's plan.

The UT Policies also balance the need for reliable and sustainable service with the environmental and land use considerations in the Comprehensive Plan. The UT Policies encourage environmentally sensitive construction standards (UT-3); consideration of the land use plan of the area (UT-7), surrounding neighborhoods (UT-8, UT-77, UT-95), greenbelt and open spaces (UT-69), and sensitive sites in close proximity to residentially-zoned districts (UT-96); and implementation of Low Impact Development principles and vegetation management (UT-13, UT-57, UT-66). The UT Policies encourage utility, consumer, and community education, outreach and input (UT-11, UT-75); a reasonable balance between potential impacts and the costs of mitigating those impacts (UT-94); and the integration of electrical and telecommunications infrastructure in order to avoid unnecessary degradation (UT-60, UT-65, UT-64). UT-97 summarizes the balancing required by the UT Element with the following language, "[a]void, minimize, and mitigate the impacts of new or expanded electrical facilities through the use of land use regulation and performance standards that address siting considerations, architectural design, site screening, landscaping, maintenance, available technologies, aesthetics, and other appropriate measures."

The Comprehensive Plan recognizes the tension between the utility's obligation to meet growing demand and provide reliability, and the policies that are designed to ensure that new and expanding utility facilities are sensitive to neighborhood character. Map UT-7 identifies planned electrical facilities that have the potential to create significant incompatibilities with Bellevue neighborhoods. Sensitivity factors such as proximity to residential neighborhoods, visual access, and expansion within or beyond an existing facility border were considered in identifying potential incompatibilities. The general locations and conceptual alignments of the proposal provided in Map UT-7 are intended to increase transparency of the siting process for PSE and the public, while also ensuring the utility's ability to meet system needs.

With the Conditions of Approval specified in Section X of this Staff Report, the proposal is consistent with the UT Policies. For example, PSE proposes to site the alignment in an existing corridor that is shared with another utility (the Olympic Pipeline system) and will consolidate the lines onto fewer poles. PSE will also be required to adjust pole types and color to limit visual impacts, develop vegetation management that maintains flexibility for property owners, and limit the number of telecommunications facilities that can be located on the transmission line to remain the existing number.

The Conditions of Approval also assure that the proposal will be compatible with the land use pattern established in the Comprehensive Plan and will minimize the impacts of the proposal on neighborhoods that surround, or are adjacent to, the existing corridor. The land use pattern established in the Comprehensive Plan along the existing corridor is a geographic area within the City where the electrical utility facilities have become a fixture of the landscape. The proposal will not be located in any new parks and open spaces and will be limited to the existing corridor. Where feasible, the proposal is designed to avoid and minimize

impacts to the character of existing neighborhoods by retaining and replacing trees within neighborhoods and parks, by limiting tree removal to the amount necessary to ensure safe operation of the proposed lines, and by avoiding or minimizing impacts to visual character. PSE will also be required to provide landscape screening and fencing of the Richards Creek substation as required by LUC 20.20.255.F (see Section IV.A of this Staff Report), and to contact the City regarding any proposed maintenance or removal of vegetation in City right-of-way.

Undergrounding the transmission line was suggested as a mitigation measure, but it was removed from consideration because of cost and feasibility considerations. For further discussion of the cost and feasibility issues considered with respect to undergrounding, see Section VI.C of this Staff Report and the discussion regarding undergrounding contained in Attachment B to this Staff Report (Alternative Siting Analysis).

Despite the Comprehensive Plan's anticipation of the proposal and the proposal's location in the existing corridor, one portion of the corridor, approximately 0.8 mile in length within the Somerset neighborhood (see the Final EIS, Figure 4.2-12), will be impacted by increased pole heights, as described in the Final EIS. The City's applicable Comprehensive Plan policies do not protect private views (see UT-8 and UT-95). However, this limited area in the Somerset neighborhood has lower building and vegetation heights due to private neighborhood covenants that restrict building and vegetation height to protect views. Therefore, the increased pole height will increase the contrast within this unique neighborhood between the utilities and the low buildings and low vegetation that result from the private covenants protecting views.

As explained in detail below in connection with conditional use decision criteria LUC 20.30B.140.B, PSE modified its pole design to reduce the necessary height in the Somerset neighborhood to respond to the existing physical characteristics of this neighborhood. Consistent with the Comprehensive Plan and Policy UT-8, these modifications to pole height and color are designed to minimize and mitigate the visual impacts in the Somerset neighborhood. Although the visual impacts in this area of the City are considered significant, these impacts do not create an inconsistency with the Comprehensive Plan when the entire residential community surrounding the transmission line in Somerset has been built next to the existing corridor. In addition, the proposal is consistent with the land use pattern in this limited area and, as modified, responds to the existing or intended character of the community.

Several UT policies call for ensuring the protection of health and safety as infrastructure projects are developed (UT-3, UT-92, UT-93, UT-94). These policies complement the Land Use policies that call for accommodating commercial uses that serve community needs, while also maintaining the health and vitality of residential areas (LU-1). Consistent with these policies, and with the Conditions of Approval specified for pipeline safety in Section X, the Project will not adversely affect public safety or the health or vitality of residential areas within the City.

Finally, while a portion of the proposal will cause visual impacts within the Somerset area, the Energize Eastside project helps ensure reliable electrical service for the City. PSE has located the proposal within the existing corridor long recognized in the Comprehensive Plan as the location for the Project; and PSE has sited and designed the proposal to minimize impacts to the extent feasible, within the constraints posed by meeting those other policy objectives identified by the City. In light of the balancing required by the UT Element and with the Conditions of Approval imposed under the City's regulations and SEPA review, the Project is consistent with the UT policies in the Comprehensive Plan.

Land Use (LU), Parks (PA), Urban Design (UD), and Neighborhoods (N) Comprehensive Plan Policies

Finding: In addition to the UT Element, policies from the Land Use, Parks, Neighborhoods, and Urban Design Elements of the Comprehensive Plan apply to PSE's proposal. The specific Land Use Policies that work in concert with the UT Element also balance reliable utility service with the protection of neighborhood character and preservation of parks, open space, and tree canopy throughout the City. See LU-2 (Retain the City's park-like character through the preservation and enhancement of parks, open space, and tree canopy throughout the City), LU-14 (Protect residential areas from the impacts of non-residential uses of a scale not appropriate to the neighborhood). The LU Element also calls for accommodating commercial uses that serve community needs, while also maintaining the health and vitality of residential areas (LU-1).

Similarly, several Park and Urban Design Policies focus on protecting the City's park-like character through preservation of tree canopy, mature trees, and natural systems while also recognizing the City's urban, suburban, and Pacific Northwest character (PA-30, PA-31, UD-2, UD-6, UD-54, UD-57.). Additional UD Policies and Neighborhood Policies promote water conservation and neighborhood safety, character, and diversity. (UD-56, N-1, N-9.)

The proposal, as conditioned, will be compatible with the land use pattern established in the Comprehensive Plan; the proposal will minimize impacts of the proposal on neighborhoods that surround, or are adjacent to, the existing corridor; and the proposal will not be located in any new parks and open spaces because it will be limited to the existing corridor. There would be no long-term impacts to land use and housing from the proposal, and the visual impacts in the Somerset area identified by the FEIS, while potentially unwelcome changes to views of the neighborhood and more distant scenic resources, are not anticipated to cause the health and vitality of this residential area to deteriorate.

Private and park properties within PSE's utility corridor are subject to restrictions determined by PSE to be necessary for safe operation of the transmission lines. To the extent tree removal will be required to ensure safe operation of the proposal and adequate distance from the lines, PSE will minimize tree removal to the maximum extent possible and replace trees within neighborhoods and parks. Therefore, the required tree removal associated with the proposal is not considered inconsistent with applicable LU, PA and UD Policies that recognize the City's park-like and Pacific Northwest character.

Similarly, operation of the Richards Creek substation will be compatible with the existing and nearby industrial land uses and neighborhood character. The proposed substation site is owned by PSE and has been used for storage of equipment and vehicles. Construction and operation of a new substation will not represent a substantive change to the existing conditions at the site and is consistent with the light industrial (LI) land use designation for the site.

Richards Valley (S-RV), Factoria (S-FA) and Newport Hills (S-NH) Subarea Plan Policies

Finding: The proposal is consistent with the Richards Valley (S-RV), Factoria (S-FA), and Newport Hills (S-NH) Subarea Plan Policies. The Richards Creek substation will be located in Richards Valley on an 8.46-acre property zoned LI that is adjacent to PSE's existing Lakeside substation and is currently used as a PSE pole storage yard. Richards Valley Subarea Plan Policy S-RV-20 encourages the use of common corridors for new utilities if needed, and Policy S-RV-33 encourages development for LI uses with sensitivity to the natural constraints of the sites.

An expanded substation in the South Bellevue Segment is a necessary component of the proposal, yet topographic and environmental constraints prevent the southern expansion of the existing Lakeside substation. Although PSE does propose some construction at the Lakeside substation, all upgrades to the Lakeside substation will occur within the existing footprint of this substation. The new Richards Creek substation will be located on a parcel adjacent to the Lakeside substation consistent with S-RV-20 and S-RV-33. Additional discussion of the location and development of the Richards Creek substation is in Sections II.C and III of this Staff Report.

Subarea Plan Policies S-RV-1, S-RV-6, S-RV-7, S-FA-8, S-FA-9, S-NH-8, S-NH-28, and S-NH-30 call for the protection of the natural environment, water resources, and critical areas in Richards Valley, Factoria and Newport Hills. Wetlands are generally concentrated on or near the Richards Creek substation site or the Coal Creek Natural Area, with 6 wetlands along the transmission line corridor. South of the proposed Richards Creek substation the existing corridor is characterized by the I-90 business corridor with commercial offices, high-tech industries, and commercial shopping centers. The Newport Hills Subarea is made up of single-family and multi-family neighborhoods with a core commercial district in the center of the community.

With the Conditions of Approval specified for vegetation and habitat protection, and consistent with the critical areas analysis found in Section IV.B, the proposal is consistent with Subarea Plan Policies S-RV-1, S-RV-6, S-RV-7, S-FA-8, S-FA-9, S-NH-8, S-NH-28, and S-NH-30.

Subarea Plan Policy S-FA-24 encourages the undergrounding of utility distribution lines in areas of new development and redevelopment, but does not discuss transmission lines. The use of the existing corridor, which is specifically identified in Map UT-7 (see Attachment F to this Staff Report), does not impose a

new transmission line on new areas and does not require the acquisition of new easements. Impacts generally associated with the undergrounding of the transmission lines are addressed in the Phase 1 Draft EIS. Although undergrounding the line was suggested as a mitigation measure in the Final EIS, it is no longer being considered for this segment due to cost and feasibility concerns similar to those discussed in Section VI.C. The removal of undergrounding of the transmission line from consideration due to infeasibility does not create a conflict with S-FA-24, particularly given that PSE's proposal is for utility transmission lines, not distribution lines.

2. **The design is compatible with and responds to the existing or intended character, appearance, quality of development, and physical characteristics of the subject property and immediate vicinity.**

   Finding: PSE's proposal is designed to respond to the existing and intended character appearance, quality of development, and physical characteristics of the subject property and the immediate vicinity. Because the Project is sited in an existing corridor shared with another utility (the Olympic Pipeline system), the Project will not introduce a change in land use. It will consolidate the lines onto fewer poles, which, although larger, will not increase visual clutter and could reduce it in some areas. Various pole treatments will be employed to complement the natural environment, and vegetation management will maintain the general appearance of landscaping in a similar manner as the present. Although a number of trees will be removed, the remaining and proposed trees will partially screen views of the taller poles. Likewise, the proposed substation will be screened by a slope and native vegetation. Reinstallation of telecommunications facilities on the same transmission facilities following construction will ensure that there will not be an increase in the number of telecommunications facilities to the maximum extent feasible.

   The City's Comprehensive Plan states that electrical utility facilities should be designed, constructed, and maintained to minimize the impact on surrounding neighborhoods (UT-8). The Somerset neighborhood developed around the transmission line corridor, so the increase in height of the current transmission line is not a new use. In the portion of the existing corridor within the Somerset neighborhood where the Project will significantly impact neighborhood character (see Figure 4.2-12 in the Final EIS), the pole design was modified to reduce the necessary height, using dual monopoles instead of single monopoles preferred in other locations within the corridor. These modifications to pole design respond to the existing physical characteristics of the Somerset neighborhood, which has lower building and vegetation heights than other areas of the corridor. The visual impacts in this area, while considered significant, will not cause blight, as defined in the Revised Code of Washington (RCW) 35.81.015, or cause substantial dilapidation or deterioration in this portion of the Somerset neighborhood.

   Further modifications to necessary pole heights within the Somerset neighborhood would increase the number of poles in the neighborhood and result in additional impacts to the character and appearance of the immediate vicinity. For example, the City requested that PSE provide additional information regarding pole heights in the Somerset neighborhood as part of the land use

process.[31] The analysis provided in response by PSE indicates that pole heights in the Somerset neighborhood could, on average, be reduced by around 16 feet. In order to facilitate this further reduction in pole height, however, the number of poles would more than double (approximately 24 additional poles) and poles would be sited on properties that do not have poles currently (approximately 17 poles sited on new properties). (PSE 9-21-18).

An increase in the number of poles in the Somerset neighborhood would also impact the physical characteristics of the corridor and the immediate vicinity because the quantity of excavation would more than double due to the increased number of poles. Similarly, additional vegetation impacts, including additional tree removal and fewer replanting options, would occur in the immediate vicinity of the shorter poles. With taller poles, the conductors are installed with more sag (i.e., they curve more), so the conductor attachment poles are farther from the ground, which allows for taller vegetation options. Thus, the increase in pole number required for shorter poles would result in increased excavation, more tree removal to accommodate the additional poles, and fewer screening options for both the existing and new pole locations within the corridor.

Shorter poles (or a significant increase in the number of poles) may also increase the potential for interaction with the co-located Olympic pipeline. While increased EMF levels and potential interaction with the pipeline are unrelated to the visual impacts to the Somerset neighborhood identified in the Final EIS, this information does suggest that the current proposal strikes a better balance.

The Comprehensive Plan lacks policies to protect private residential views. Nevertheless, because building and vegetation heights are lower in the Somerset neighborhood than other areas of the corridor due to private covenants, viewer sensitivity in portions of Somerset is higher than in other areas of the corridor. It is recognized that the contrast between the taller poles proposed by the Project and the current pole heights in Somerset, combined with high viewer sensitivity, could cause some Somerset residents to choose to move. However, the entire residential community surrounding the transmission line has been built next to the existing corridor, and the Project, as modified, is consistent with and responds to the existing or intended character, appearance, quality of development, and physical characteristics the Somerset community. Despite the visual impacts identified in the Final EIS, the Somerset neighborhood will continue to be a healthy, vibrant, and unique community. With the Conditions of Approval specified below for aesthetic impacts and vegetation management, the Project is consistent with LUC 20.30B.140.B.

3. **The conditional use will be served by adequate public facilities including streets, fire protection, and utilities.**

[31] Letter from Heidi Bedwell, City of Bellevue Environmental Planning Manager, to Brad Strauch, PSE Program Manager, dated August 14, 2018. The City's August 14, 2018 letter to PSE is included in the DSD official files for Permit Nos. 17-120556-LB and 17-120557-LO.

Finding: PSE's proposal will be served by all required public facilities, including streets, fire protection, water, stormwater control, and sanitary sewer as demonstrated in the Technical Review in Section V of this Staff Report.

4. **The conditional use will not be materially detrimental to uses or property in the immediate vicinity of the subject property.**

Finding: PSE's proposal will not be materially detrimental to uses or property in the immediate vicinity of the subject property so long as the proposal meets code requirements identified in Sections IV and VIII, and complies with the Conditions of Approval listed in Section X.

Construction impacts will be short-term, and any individual property will be affected for a few days over a few months. Notification of property owners has already begun and will continue through completion. Safety and environmental measures described in Sections IV, V, VI and X will minimize any potential damage to properties in the immediate vicinity during construction. Construction is not expected to be materially detrimental to adjacent properties.

Tree removal within PSE's easement is part of the easement agreement, and thus property owners were aware in purchasing property that they were subject to restrictions determined by PSE to be necessary for safe operation of the transmission lines. Therefore, required tree removal is not considered detrimental to properties.

While there are safety risks for occupants of adjacent properties associated with the high voltage lines and the presence of the Olympic Pipeline system, these risks will not increase with the Project, and will likely be reduced, as discussed in Section VI.B. The new poles will be less likely to fall than wood poles due to better foundations and higher strength material.

The Project will increase the height of poles and conductors, making the transmission lines a more prominent feature that generally contrasts with its surroundings. Removal of vegetation will also make the transmission lines more prominent. The taller poles will not significantly affect any public views, but will significantly impact the visual character of a portion of the Somerset neighborhood. This impact in the Somerset area is considered significant under SEPA, but the impacts to individual properties or uses in the immediate vicinity of the Project will not be materially detrimental. Likewise, and as discussed above in connection with CUP decision criteria LUC 20.30B.140.2, the entire residential community surrounding the transmission line has been built next to the existing corridor, and despite the visual impacts identified in the Final EIS, the Somerset neighborhood will continue to be a healthy, vibrant, and unique community.

Property owners closest to the transmission lines typically own and use the property beneath the transmission lines, subject to terms of the easement that was on the property when purchased. Visual enjoyment of their property will remain largely unchanged, with the exception that the poles will be larger, made of metal rather than wood, and in slightly different locations. In some cases, the new pole configuration will mean fewer poles, and the lines will be higher above

the line of sight for properties in the immediate vicinity, thereby reducing the visual impacts to some of the properties closest to the Project. PSE has also offered to work with each property owner to adjust the location of the new poles to the extent feasible for the convenience of individual property owners. These changes are not considered materially detrimental.

For properties farther from the lines but still nearby, such as those across the street to the east or west of the corridor, the visual impacts to neighborhood character will be more apparent. The transmission lines will become dominant features of the neighborhood. At present, trees, topography, and structures obscure the transmission line from the view of most properties that are not immediately adjacent to the lines, except at street crossings and at some uphill properties with open views. PSE's proposal will affect private scenic views upslope of the transmission lines in a portion of the Somerset neighborhood, but private views are not protected under City of Bellevue regulations or policy. These impacts, while potentially unwelcome changes to views of the neighborhood and more distant scenic resources, will not be materially detrimental to these properties or uses.

As conditioned, PSE's proposal will not be materially detrimental to uses or property in the immediate vicinity of the proposed substation or transmission line corridor. See Section X for the Conditions of Approval.

5. **The conditional use complies with the applicable requirements of the Land Use Code.**

   Finding: As conditioned, this Conditional Use Permit application has met the applicable performance standards and requirements of the Land Use Code. **For more information, refer to the discussion in Section IV – Consistency with Land Use Code and Zoning Regulations.**

IX. RECOMMENDATION AND DECISION

After conducting the various administrative reviews associated with PSE's proposal, including applicable land use consistency, SEPA, and City Code and Standard compliance reviews, the Director of Development Services does hereby **RECOMMEND APPROVAL** of PSE's proposal subject to the following conditions in addition to all design components included PSE's proposal.

X. RECOMMENDED CONDITIONS OF APPROVAL

Staff recommends imposing the following conditions to ensure compliance with the relevant decision criteria and code requirements. If imposed by the Hearing Examiner, these conditions must be complied with on plans submitted with the construction permits in addition to all design components included in PSE's proposal.

Applicable Codes, Standards, and Ordinances
PSE shall comply with all applicable Bellevue City Codes, Standards, and Ordinances including but not limited to:

Applicable Codes, Standards, & Ordinances	Contact Person
Clearing & Grading Code – BCC 23.76	Tom McFarlane tmcfarlane@bellevuewa.gov
Fire Code – BCC 23.11	Sean Nichols snichols@bellevuewa.gov
Land Use Code – BCC Title 20	Heidi Bedwell hbedwell@bellevuewa.gov
Noise Control Code – BCC 9.18	Heidi Bedwell hbedwell@bellevuewa.gov
Transportation BCC 14.60	Fay Schafi fschafi@bellevuewa.gov
Transportation ROW BCC 11.70 & 14.30	Tim Stever tstever@bellevuewa.gov
Utilities Codes – BCC Title 24	Art Chi achi@bellevuewa.gov

A. GENERAL CONDITIONS

1. **Changes to Pole Location and/or Alignment:** Changes to the pole location and/or alignment submitted as part of this Conditional Use application shall be reviewed as a Land Use Exemption to this Conditional Use approval prior to construction.

AUTHORITY: LUC 20.30B.175
REVIEWER: Heidi Bedwell, Land Use

2. **Conceptual Design Utilities:** Utility Department approval of the subject permits is based on the conceptual design only. Changes to the site layout may be required to accommodate the required utilities after utility engineering is approved.

AUTHORITY: BCC Title 24.02, 24.04, 24.06
REVIEWER: Arturo Chi, Utilities

3. **Clearing and Grading Permit Required:** An application for a clearing and grading permit must be submitted and approved before construction can

begin. Plans submitted as part of any permit application shall be consistent with the activity permitted under this approval.

AUTHORITY: LUC 20.30P.140; BCC 23.76.035 (Clearing & Grading Code)
REVIEWER: Thomas McFarlane, P.E.; Bellevue Development Services; Clearing & Grading Section

4. **Utility Permit and/or Utility Developer Extension Agreements:** The water, sewer, and storm drainage systems shall be designed per current City of Bellevue Utility Codes and Utility Engineering Standards. All design review, plan approval, and field inspection shall be performed under the individual permits and/or Utility Developer Extension Agreements depending on the extent of the work.

AUTHORITY: BCC Title 24.02, 24.04, 24.06
REVIEWER: Arturo Chi, Utilities

5. **Sight Distance:** All structures installed under terms of this proposal must meet the City's sight distance requirements.

AUTHORITY: BCC 14.60.240, 14.60.241; Transportation Design Manual (RL-100-1, RL-110-1, RL-120-1).
REVIEWER: Fay Schafi, (425) 452-4574

B. PRIOR TO ISSUANCE OF ANY BUILDING/ENGINEERING/CLEARING AND GRADING PERMITS

1. **Right-Of-Way Use Permit:** Prior to issuance of any construction or clearing and grading permit, the applicant shall apply for required right-of-way use permits from the City's Transportation Department, which may include:

- Designated truck hauling routes.
- Truck loading/unloading activities.
- Location of construction fences.
- Hours of construction and hauling.
- Requirements for leasing of right of way or pedestrian easements.
- Provisions for street sweeping, excavation and construction.
- Location of construction signing and pedestrian detour routes.
- All other construction activities as they affect the public street system.

In addition, the applicant shall submit for review and approval a plan for providing pedestrian access during construction of this project. Access shall be provided at all times during the construction process, except when specific construction activities such as shoring, foundation work, and construction of

frontage improvements prevent access. General materials storage and contractor convenience are not reasons for preventing access.

The applicant shall secure sufficient off-street parking for construction workers before the issuance of a clearing and grading, building, a foundation or demolition permit.

AUTHORITY: BCC 11.70 & 14.30
REVIEWER: Tim Stever, (425) 452-4294

2. **Civil Engineering Plans – Transportation:** Where required, civil engineering plans produced by a qualified licensed engineer must be approved by the Transportation Department prior to issuance of the clearing and grading permit. The design of all street frontage improvements and driveway accesses must be in conformance with the requirements of the Americans with Disabilities Act, the Transportation Development Code, the provisions of the Transportation Department Design Manual, and specific requirements stated elsewhere in this document. All relevant standard drawings from the Transportation Department Design Manual shall be copied exactly into the final engineering plans. Requirements for the engineering plans include, but are not limited to:

- Traffic signs and pavement markings.
- Curb, gutter, sidewalk, and driveway approach design. The engineering plans shall be the controlling document on the design of these features; architectural and landscape plans must conform to the engineering plans as needed.
- Curb ramps and crosswalks constructed per ADA standards
- Installation or relocation of streetlights and related equipment.
- Show the required sight distance triangles and include any sight obstructions, including those off-site. Sight distance triangles must be shown at all driveway locations and must consider all fixed objects and mature landscape vegetation. Vertical as well as horizontal line of sight must be considered when checking for sight distance.
- Landings on sloping approaches are not to exceed a 7% slope for a distance of 30 feet approaching the back edge of sidewalk. Driveway grade must be designed to prevent vehicles from bottoming out due to abrupt changes in grade.
- Driveway aprons must be constructed in accordance with Design Manual Standard Drawings SW-140-1 through SW-190-1.
- Location of fixed objects in the sidewalk or near the driveway approach.
- Trench restoration within any right of way or access easement.

The following street and access improvements are required to be designed and shown in the civil engineering plan set:

- Provide a concrete driveway approach at SE 30th Street Per City of Bellevue's Transportation Design Manual. Driveway approach shall be a minimum of 26-feet wide. Minimum of 30-feet distance is required from the right-of-way line to the new gate location.

- No fixed objects, including fire hydrants, trees, and streetlight poles, are allowed within ten feet of a driveway edge, defined as Point A in standard drawings SW-140-1 through SW-190-1. Fixed objects are defined as anything with breakaway characteristics greater than a four-inch by four-inch wooden post.

- A street light analysis is required for SE 30th Street. Street lighting shall meet Bellevue's minimum standards contained in the Transportation Design Manual Appendix A or as amended.

- The applicant shall be required to provide appropriate clearances as provided for in the most recent National Electric Safety Code (NESC) from existing overhead signal equipment for the installation of the overhead transmission lines.

- Construction of all street and access improvements must be completed prior to closing the clearing and grading permit and right of way use permit for this project. A Design Justification Form must be provided to the Transportation Department for any aspect of any pedestrian route adjacent to or across any street that cannot feasibly be made to comply with current ADA standards. Design Justification Forms must be provided prior to approval of the clearing and grading plans for any deviations from standards that are known in advance. Forms provided in advance may need to be updated prior to project completion. For any deviations from standards that are not known in advance, Forms must be provided prior to project completion.

AUTHORITY: BCC 14.60, Transportation Department Design Manual, and the Americans with Disabilities Act
REVIEWER: Fay Schafi, (425) 452-4574

3. **Turbidity and pH Monitoring Required:** A turbidity and pH monitoring plan must be submitted and approved prior to issuance of the clearing and grading permit. . The plan must be developed in accordance with the Turbidity & pH Monitoring Requirements contained in the Bellevue Clearing & Grading Development Standards, indicating appropriate locations and timing of turbidity

and pH sampling and testing. The plan must be implemented during site work and shall be modified as appropriate during construction to reflect pace and extent of construction activity.

AUTHORITY: BCC 23.76.160 (Clearing & Grading Code)
REVIEWER: Thomas McFarlane, P.E.; Bellevue Development Services; Clearing & Grading Section

4. **Drainage Report Required:** Provide a final drainage report that documents the storm drainage minimum requirements triggered for the project. In the report include either figure 2.2 or 2.3 from the Utilities Surface Water Engineering Standards. PSE shall document if the project qualifies as either new development or redevelopment and include a project summary. Document the amount of new, replaced and pollution generating impervious surface changes. PSE shall also document any work within any critical area, wetlands and/or buffers in the report.

AUTHORITY: Title 24.02, 24.04, 24.06 BCC
REVIEWER: Arturo Chi, Utilities

5. **Final Wetland Enhancement Plan:** PSE shall submit a Final Wetland Enhancement Plan consistent with the plans submitted as part of this application in Attachment I (Critical Areas Report). The Plan shall be submitted as part of the required clearing and grading permit . All plant species, size, and spacing shall be consistent with the standard found in the City's Critical Areas Handbook.

AUTHORITY: LUC 20.25H.220; 20.25H.230
REVIEWER: Heidi Bedwell, Land Use

6. **Final Stream Habitat Improvement Plan:** PSE shall submit a Final Stream Habitat Improvement Plan consistent with the plans submitted as part of this application in Attachment I (Critical Areas Report). The Plan shall be submitted as part of the required clearing and grading permit. All plant species, size, and spacing shall be consistent with the standards found in the City's Critical Areas Handbook. The Plan shall include methods for fish exclusion, construction sequencing, monitoring and maintenance.

AUTHORITY: LUC 20.20H.210, 20.25H.220, 20.25H.230
REVIEWER: Heidi Bedwell, Land Use

7. **Final Mitigation Plan for Permanent Impacts and Vegetation Conversion in Critical Areas and Critical Area Buffers:** PSE shall submit a

final mitigation plan for all permanent impacts and vegetation conversion activities consistent with Attachment I (Critical Areas Report) for review and approval by the City of Bellevue prior to issuance of the Clearing and Grading Permit. The Plan shall depict tree and other vegetation to be removed within all critical area or critical area buffers. Trees within a critical area or critical area buffer shall be replaced at a minimum of a 3:1 ratio. All other areas of vegetation removal shall be mitigated in an equivalent area consistent with the replacement ratios contained in Attachment I (Critical Areas Report). Final design shall also include wildlife snags designed as recommended from the State of WA Department of Fish and Wildlife where feasible and in consideration of PSE's Avian Protection Plan. The mitigation plan shall include BMPs for construction sequencing, monitoring, and maintenance and shall be developed consistent with the City's Critical Areas Handbook for species choice, plant size, and spacing.

AUTHORITY: Part 20.30P LUC
REVIEWER: Heidi Bedwell, Land Use

8. **Final Restoration Plan for Temporary Impacts in Critical Areas and Critical Area Buffers:** PSE shall submit a final restoration plan showing temporary construction impacts. Restoration of impacts shall be with native plants where native plants are being removed. All other areas of temporary impact shall be re-vegetated except for those areas which contained impervious surfaces prior to construction activities.

AUTHORITY: LUC 20.25H.220
REVIEWER: Heidi Bedwell, Land Use

9. **Avian Protection Program:** PSE shall implement their Avian Protection Plan consistent with Attachment I (Critical Areas Report), including methods and equipment to reduce avian collisions, electrocution, and problem nests. To reduce impacts to birds, the timing and location of construction work shall consider critical time periods such as the nesting season for species of local importance present in the Project area. A habitat biologist or other qualified professional shall submit a plan documenting recommended measures to limit impacts.

AUTHORITY: Part 20.30P LUC, LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

10. **Critical Areas and Critical Area Buffers Maintenance and Monitoring Reports:** Mitigation plans shall include methods for vegetation maintenance and monitoring and shall be submitted as part of the required clearing and grading permit. Mitigation sites are required to be maintained and

monitored for five years to ensure the plants successfully establish. Annual monitoring reports are required to be submitted to document the plants are meeting approved performance standards. Photos from selected photo points shall be included in the monitoring reports to document the planting. Land Use inspection is required by Land Use staff to end the plant monitoring period.

Reporting shall be submitted no later than the end of each growing season or by December 31st, and shall include a site plan and photos from photo points established at the time of Land Use Inspection. Reports shall be submitted to Heidi Bedwell, or the City of Bellevue's successor Environmental Planning Manager, by the above-listed date and can be emailed to hbedwell@bellevuewa.gov or mailed directly to:

Environmental Planning Manager
Development Services Department
City of Bellevue
PO Box 90012
Bellevue, WA 98009-9012

AUTHORITY: Land Use Code 20.30P.140; 20.25H.220
REVIEWER: Heidi Bedwell, Land Use

11. **Assurance Device- Critical Areas Mitigation:** As part of the Clearing and Grading Permit, PSE shall submit a cost estimate prepared by a qualified professional for the proposed planting materials and installation costs. An installation security shall be provided to the City of Bellevue in the amount of 150% of the total cost. After the final mitigation plans have been implemented and inspected by the City, the installation assurance device will be released and the City shall request and retain a maintenance assurance device in the amount of 20% of the total cost estimate. The maintenance assurance device shall be kept by the City until the performance objectives have been met.

AUTHORITY: LUC 20.40.490
REVIEWER: Heidi Bedwell, Land Use

12. **Geotechnical Review:** The project geotechnical engineer (see BCC 23.76.030.G) must review the final construction plans, including all foundation, retaining wall, shoring, cut, and fill designs. A letter from the geotechnical engineer stating that the plans conform to the recommendations in the geotechnical report and any addendums and supplements must be submitted to the clearing and grading section prior to issuance of the construction permit.

AUTHORITY: BCC 23.76.050 (Clearing & Grading Code)
REVIEWER: Thomas McFarlane, P.E.; Bellevue Development Services; Clearing & Grading Section

13. **Seismic Design:** The project geotechnical engineer shall certify that PSE has conducted geotechnical hazard evaluations for all proposed elements of the substation foundations, walls, and transmission poles, and that all geotechnical recommendations have been incorporated into project design. PSE shall provide required certification and supporting documentation to the City of Bellevue. The geotechnical report shall address all code requirements and provide a discussion of how the design meets or exceeds following:

- The 2012 International Building Code (IBC), or as amended, parameters for short period spectral response acceleration (SS), 1-second period spectral response acceleration (S1), and Seismic Coefficients FA and FV presented in Table 2 of the geotechnical report
- Consistent with the project geotechnical engineer's recommendation, use soil input parameters for lateral load design that consider the effects of liquefaction through the application of p-multipliers for LPile parameters (LPile is a computer program used to analyze deep foundations under lateral loading).
- North of the proposed Richards Creek substation, reevaluate the lateral spreading risk to the proposed poles in this area once their final locations have been selected, to determine appropriate foundation dimensions.
- Where areas subject to liquefaction are present, extend foundations below the loose to medium density liquefiable deposits into underlying dense, non-liquefiable soils.
- Reevaluate the axial capacity of the pole foundations and potential downdrag loads for poles in areas subject to liquefaction once final locations are selected, and consider these in the structural design.

AUTHORITY: Part 20.30P LUC, LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

14. **Final Landscape Plan Richard Creek Substation:** PSE shall submit a final landscape plan as part of the required construction permits consistent with the landscape plan submitted as part of this application (Attachment A [Project Plans]). In addition to the vegetation proposed, all disturbed areas not mitigated for critical area impacts shall be planted with low growing native vegetation. Landscape plan shall include plant species, quantity, spacing and cost estimate for plant material and installation. To ensure plant establishment, the applicant shall provide a landscape assurance device that shall cover 20% of the fair market value of labor and materials for the initial landscape installation of all areas of restoration required for the substation landscaping. This assurance

device will cover the landscape maintenance of the project for a period of one year from the date of final inspection.

AUTHORITY: LUC 20.20.520.K.1 & 2, 20.40.490
REVIEWER: Heidi Bedwell, Land Use

15. **Lighting Plan Richards Creek Substation:** PSE shall submit a lighting plan as part of the required clearing and grading permit showing proposed lighting at the substation. Lighting shall be designed to direct light away from the stream and wetland areas including the use of shields or other methods to reduce spillover into critical areas.

AUTHORITY: LUC 20.25H.080A and 100
REVIEWER: Heidi Bedwell, Land Use

16. **Tree Removal Non-Critical Areas:** PSE shall submit a final Tree Replacement plan as part of the required clearing and grading permits consistent with Attachment E (Vegetation Management Plan) submitted as part of this application.

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

17. **Mitigation for Tree Removal in City of Right-of-Way (Fee in Lieu Plan):** PSE has agreed to mitigate for the loss of trees located in the City right-of-way with a fee in lieu method. Mitigation will be based on a total value of the trees to be removed using the methods outlined in the Council of Tree and Landscape Appraisers, *Guide for Plant Appraisal.* The fee will be used for replanting in the City right-of-way or on other city owned parcels.

PSE shall prepare a final tree removal plan depicting trees to be removed in the right-of-way including their size and species. This plan shall be submitted to the City of Bellevue for approval. PSE and the City will identify and agree upon an independent third party certified arborist to determine the total value of trees removed from the City right-of-way. The arborist shall use the methods outlined in the Council of Tree and Landscape Appraisers, *Guide for Plant Appraisal.* PSE shall pay for the arborist appraisal. No tree removal is allowed until acceptance of the plan, appraisal, and payment to the City of Bellevue has occurred.

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

18. **Installation Surety-Tree Replacement (Non-Critical Areas):** PSE shall submit as part of the required Clearing and Grading permit a cost

estimate in the amount of the total trees proposed for replacement in non-critical areas. The estimate shall be based on the following replacement ratios contained in Table VI-1 of the Staff Report:

Tree Size (dbh)	Replacement Ratio
< 6″	As requested by property owner
6″ to ≤ 12″	1:1
> 12″ to < 30″	2:1
≥ 30″	3:1

The estimate and surety provided by PSE as required by this condition shall be in the amount of 100% of the estimated cost of tree replacement (including materials and labor). The surety will be released one year after tree replacement, consistent with the applicable Tree Replacement plan, is complete.

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

19. **Final Restoration Plan for Temporary Impacts (Non-Critical Areas):** PSE shall submit a final restoration plan showing temporary construction impacts. The impacts shall be restored with vegetation consistent with the pre-project condition when vegetation has been removed. Other improvements impacted by construction activities shall be restored in coordination with the underlying property owner.

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

20. **Pesticides, Herbicides and Fertilizers:** Applicant shall submit written information identifying the pesticide, herbicide and/or insecticide to be used AND written confirmation that the product used has been reviewed and approved by a consulting arborist. Work shall be done in accordance with the City of Bellevue's "Environmental Best Management Practices."

Prior to any use of pesticides, herbicides, and/or fertilizers associated with the proposal, the applicant must receive approval from Land Use under the required Clearing and Grading Permit.

AUTHORITY: LUC 20.25H.080, LUC 20.20.255G
REVIEWER: Heidi Bedwell, Land Use

21. **Pole Finish:** To reduce aesthetic impacts to the surrounding environment and reduce contrast with the surrounding environment, PSE shall

implement proposed pole finishes consistent with the recommendations found in Attachment J (Pole Finishes Report City of Bellevue (South)).

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

22. **Final Pipeline Interaction Assessment and Design Report:** To protect nearby pipelines from interaction with the new transmission lines due to AC current density, faults caused by lightning strikes, mechanical/equipment failure, or other causes, PSE shall continue to coordinate with Olympic and include safeguards in the project design. PSE shall optimize conductor geometry, where a true delta configuration provides the greatest level of field cancellation. PSE shall operate both transmission lines at equivalent voltage ratings. These safeguards shall be certified by an engineer licensed in the state of Washington. PSE shall also install an Optical Ground Wire (OPGW) shield wire or equivalent shield wire recommended by DNV GL 2016 on the transmission line poles.

PSE shall perform an AC Interference Study incorporating the final transmission line route, configuration, and operating parameters to confirm that current densities remain within acceptable levels. PSE shall provide Olympic with the Study and provide the City with documentation establishing that the Study was performed and submitted to Olympic.

The Study shall include a report detailing how the following have been addressed:

- PSE shall obtain and incorporate all of the pipeline parameters required for detailed modeling and study (i.e., locations and details of above-grade pipeline appurtenances/stations, bonds, anodes, mitigation, etc.).
- PSE shall assess the safety and AC corrosion risks under steady-state operating conditions on the transmission lines.
- PSE shall fully assess the safety and coating stress risks for phase-to-ground faults at transmission line structures along the entire area of co-location, including both inductive and resistive coupling.
- PSE shall reassess the safe separation distance at each pole location to minimize arcing risk based on NACE SP0177-2014 and considering the findings in CEA 239T817.
- Specify appropriate distances for pole grounds from the pipeline to avoid electrical arcing as recommended by the licensed engineer.
- PSE shall incorporate mitigation measures into the project design to prevent or minimize ground fault arcing to the pipelines in areas where the pipelines are within the modeled arcing distance of transmission line pole grounding rods.

AUTHORITY: BCC 22.02.140.B.1, 22.02.140.C
REVIEWER: Heidi Bedwell, Land Use

23. **Final Substation Plan:** Consistent with the project plans for the proposed substation, PSE shall comply with State and Federal standards to address the risk of substation fire. Designs should include the following:

- Control systems to shut down equipment experiencing a fault or malfunction;
- Systems to conduct lightning to the ground rather than through lines or equipment; and
- Alternative insulation systems for closely spaced equipment.

AUTHORITY: LUC 20.20.255.G, 20.20.255.E.6
REVIEWER: Heidi Bedwell, Land Use

24. **Construction Management and Access Plan (Pipeline Safety):** PSE shall develop Construction Management and Access Plan in coordination with Olympic's Damage Prevention Team that are mutually agreed upon by both parties. These plans shall outline the specific actions that PSE will take to protect the pipelines from vehicle and equipment surcharge loads, excavation, and other activities in consideration of Olympic's general construction and right-of-way requirements and in consultation with Olympic on the Energize Eastside project design specifically. The following general measures, at a minimum, shall be included in the Construction Management and Access Plan:

- Notify 'one-call' 811 utility locater service at least 48 hours prior to PSE or PSE-designated contractors conducting excavation work. (Olympic's line marking personnel will then mark the location of the pipelines near the construction areas. These procedures are designed to ensure that excavation will not damage any underground utilities and to decrease potential safety hazards.)

- Field verify the distance between the pipelines and transmission line pole grounds.

- Add the pipeline location and depth to project plans and drawings, and submit to Olympic for evaluation. To the extent that Olympic determines pipeline location and depth is secure or confidential information, this

information is not required to be submitted to the City of Bellevue under this condition.

- Arrange for Olympic representatives to be on-site to monitor construction activities near the pipelines.

- Identify demarcation and protection measures as recommended and required by Olympic.

- Provide all necessary information for Olympic to perform pipe stress calculations for equipment crossings and surface loads (surcharge loads). Based on pipe stress calculations and in coordination with Olympic, provide additional cover that may include installing timber mats, steel plating, or temporary air bridging; utilize a combination of these; or avoid crossing in certain identified areas to avoid impacts on the Olympic pipelines.

- Incorporate additional measures related to minimizing surcharge loads included in Olympic's general construction and right-of-way requirements.

- The Construction Management and Access Plan will identify contractor responsibilities including appropriately sized construction zones to protect the general public, construction timing limits, and other mitigation measures that will limit the exposure of the general public to potential pipeline incidents.

- No excavation or construction activity will be permitted in the vicinity of a pipeline until appropriate communications have been made with Olympic's field operations and its Right-of-Way Department. A formal engineering assessment (conducted by Olympic) may be required.

- No excavation or backfilling within the pipeline right-of-way will be permitted for any reason without a representative of Olympic on-site giving permission.

- Coordinate with Olympic regarding excavation and other construction activities to ensure that pipeline operating pressures are reduced prior to these activities when necessary.

- As directed by Olympic, use soft dig methods (e.g., hand excavation, vacuum excavation, etc.) whenever the pipeline(s) are within 25 feet of any proposed excavation or ground disturbance below original grade.

- Coordinate with Olympic to ensure that an Olympic representative, trained in the observation of excavation and pipeline locating, is on-site at all times during excavation and other ground-disturbing activities that occur within

100 feet of the pipelines where the pipelines are co-located with the proposed transmission lines.

- Where excavations are within 20 feet of the Olympic Pipeline system, the project geotechnical engineer shall consider temporary casing to reduce the risk of sloughing under the pipeline.

- As required by Olympic, steel plates or mats will be placed over the pipelines to distribute vehicle loads where construction equipment needs to cross over the pipelines.

- Utility settlement monitoring points will be established on the Olympic Pipeline corridor at the direction of Olympic where drilled shafts will be within 15 feet of a pipeline (or another distance as stipulated by Olympic) to monitor settlement during installation of the drilled shafts. Settlement monitoring points will be installed so that baseline readings of the settlement monitoring points may be completed prior to the contractor mobilizing to the site. Monitoring will continue during construction on a daily basis and twice a week in the 3 weeks following construction. The monitoring readings will be reviewed by the Engineer on a daily basis. If measured settlement exceeds 1 inch, or an amount specified by Olympic, the integrity of the utility will be tested and PSE will work with Olympic to repair any damage to the utilities as a result of construction.

- The Construction Management and Access Plan shall include monitoring procedures to ensure that all mitigation measures related to construction activities are followed.

The Construction Management and Access Plan shall be submitted to the City of Bellevue before construction permit issuance. After permit issuance, any revisions or updates to the Plan shall be provided to the City in a Final Construction Management and Access Plan before construction commences.

AUTHORITY: BCC 22.02.140.B.1, 22.02.140.C
REVIEWER: Heidi Bedwell, Land Use

25. **Construction Management and Access Plan (Recreation Uses and Schools):** To reduce impacts to recreation sites as a result of project construction, PSE shall include in their Construction Access and Management Plan the following:

- Steps to coordinate with the City of Bellevue Parks Department.
- Phasing plan schedules to avoid construction activity near recreation sites, including but not limited to public parks and Tyee Middle school, during time periods when the sites are most frequently used.

- Plans for alternative access points to recreation sites and trail detours where necessary.
- Notification of local schools, or private owners (including the Somerset Recreation Club) 60 days in advance of project construction within the recreation sites and again at least 2 weeks in advance of work commencing.
- The location of signs notifying users of any temporary closure of trails or recreations sites and installation of these signs 2 weeks in advance of closure.

The Construction Management and Access Plan shall be submitted to the City of Bellevue prior to the issuance of construction permits.

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

26. **Public Outreach Plan:** PSE shall submit to the City of Bellevue a public outreach plan that details how PSE will provide information to the public about the types and locations of expected construction impacts and mitigation measures. As part of the plan, a construction outreach team shall work with affected residents and business owners to minimize construction-related impacts throughout the duration of project construction. PSE will provide a contact with whom community members can address specific concerns both prior to and during project construction. Also as part of the plan, PSE shall submit to the City quarterly reports summarizing status of public outreach efforts including issues raised by the community and how PSE is addressing concerns. Reports shall be submitted to the Development Services Department Director through project completion.

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

C. AFTER CONSTRUCTION PERMIT ISSUANCE AND DURING CONSTRUCTION

1. **State and Federal Permit Compliance:** To reduce indirect and direct water quality impacts associated with construction of the new substation and transmission lines, PSE shall comply with applicable state and federal regulatory requirements. Before any direct wetland impacts occur, PSE shall obtain the necessary state and federal authorizations. PSE shall provide the City of Bellevue copies of all required permits from the WDFW and the U.S. Army Corps of Engineers, including any requirements from the U.S. Fish and Wildlife Service and National Marine Fisheries Service prior to the City of Bellevue's pre-construction meeting.

AUTHORITY: BCC 24.06.015, 24.06.020; LUC 20.20.255.E.2
REVIEWER: Heidi Bedwell, Land Use

2. **Cultural Resources Protection:** Prior to construction, PSE shall conduct archaeological resource surveys for the selected route that include subsurface testing and a second pedestrian and subsurface survey to assess staging areas, laydown areas, stringing sites, and access roads after more information on these locations is available.

Prior to construction, PSE shall develop resource-specific mitigation measures during consultation with the Washington Department of Archaeology and Historic Preservation (DAHP), affected Tribes, King County Historic Preservation Program (KCHPP), and other appropriate stakeholders if a protected archaeological resource is identified during the pre-construction archaeological survey or historic property inventory.

PSE shall prepare an Inadvertent Discovery Plan (IDP) for the project and discuss the IDP with contractor during pre-construction meeting(s).
PSE shall apply for an archaeological excavation permit from DAHP (WAC 25-48-060) if impacts to a protected archaeological resource cannot be avoided.

If any resources are determined eligible for listing in the National Register of Historic Places (NHRP) by DAHP, mitigation measures specific to those resources shall be developed during consultation with DAHP, affected Tribes, and any other appropriate stakeholders. Any final determination and mitigation measures developed based on this determination shall be reported to the City of Bellevue to the extent allowed by law.

During construction, PSE shall follow outlined procedures in the IDP in the event that archaeological resources are identified during construction activities.

During construction, PSE shall follow the procedures identified for any historic resources through consultation with DAHP.

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

3. **Drilled Shaft Installation Plan:** Prior to construction PSE shall submit a detailed Drilled Shaft Installation Plan prepared by their construction contractor describing casing and drilled shaft construction methods. The submittal will include a narrative describing the contractor's understanding of the anticipated subsurface conditions, underground pipelines, the overall construction sequence, access to the pole locations, and the proposed pole foundation installation equipment. The contractor shall submit a detailed direct embedment pole installation plan describing both uncased and temporary casing methods. If drilled shafts are used where groundwater is present, the

concrete for drilled shafts will be placed using the "tremie" method will be considered and evaluated by an onsite geotechnical engineer (described in the geotechnical report). The Plan shall be reviewed by the project geotechnical engineer before construction commences; the Plan shall include documentation of this review, which shall be provided to the City of Bellevue Development Services Department.

AUTHORITY: Part 20.30P LUC, LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

4. **Geotechnical Inspection:** The project geotechnical engineer must provide geotechnical inspection during project construction when applicable. The geotechnical engineer must monitor and test soil cuts and fills for substation and pole foundations. The geotechnical engineer also must observe, monitor, and test any unusual seepage, slope, or subgrade conditions.

AUTHORITY: BCC 23.76.050, 23.76.160 (Clearing & Grading Code)
REVIEWER: Thomas McFarlane, P.E.; Bellevue Development Services; Clearing & Grading Section

5. **Rainy Season Restrictions:** Clearing and grading activity may be initiated during, or continue into the rainy season, which is defined as October 1 through April 30, only with written authorization of the Development Services Department. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, as appropriate for the anticipated rainy season conditions, must be implemented prior to beginning or resuming site work.

AUTHORITY: BCC 23.76.093.A (Clearing & Grading Code)
REVIEWER: Thomas McFarlane, P.E.; Bellevue Development Services; Clearing & Grading Section

6. **Street and Access Improvements:** All street and access improvements and other required transportation elements including street lights revisions, must be constructed by the applicant and accepted by the Transportation Department inspector. This includes improvements on SE 30th Street.

All areas disturbed (i.e., pavement, curb and gutter, landscaping, driveways, temporary access roads, etc.) by the project shall be restored after construction to its previous or an improved state per City of Bellevue ROW standards including current ADA standards.

AUTHORITY: BCC 14.60, Comprehensive Plan Policy UT-39, and the Transportation Department Design Manual.
REVIEWER: Fay Schafi, (425) 452-4574

7. **Pavement Restoration:** A no-street-cut moratorium is in effect on SE 30th Street. Should street cuts prove unavoidable or if the street surface is damaged in the construction process, a half-street or full-street (depending on the extent of street cuts or damage) grind and overlay will be required.

The applicant will be required to restore all damaged pavement within City right-of-way caused by construction activities related to this project. Limits and extent of pavement restoration shall be as required by the Right-of-Way use permit.

AUTHORITY: BCC 14.60. 250; Design Manual Design Standard #23
REVIEWER: Tim Stever (425) 452-4294

8. **Helicopter or Large Crane Use:** PSE shall identify any areas where a helicopter or large crane will be used to lift foundation rebar and/or poles over adjacent properties and into place, or to facilitate stringing the new transmission lines. PSE or its contractor shall provide copies of the "congested air" permit from the Federal Aviation Administration (FAA). PSE shall also coordinate with the City of Bellevue to determine where this type of construction is allowed.

AUTHORITY: Part 20.30M LUC
REVIEWER: Heidi Bedwell, Land Use

9. **Construction Stormwater Pollution Prevention Plan (CSWPPP):** The clearing and grading permit application must include a CSWPPP. The structure and content of the CSWPPP must follow the requirements of the Bellevue Clearing and Grading Code and the Bellevue Clearing and Grading Development Standards. BMPs in the plan include the following:

- Operating procedures to prevent spills.
- Control measures such as secondary containment to prevent spills from entering nearby surface waters.
- Countermeasures to contain, clean up, and mitigate the effects of a spill.
- Construction vehicle storage and maintenance and fueling of construction equipment will be located away from streams and wetlands.

To avoid groundwater contamination, if any pole installation sites are determined to need dewatering, PSE shall prepare and submit a dewatering

plan for City approval. The dewatering plan must include provisions for turbidity and pH monitoring of dewatering water. No refueling or staging shall be allowed within critical area or critical area buffers.

AUTHORITY: Part 20.25H LUC; Chapter 23.76 BCC
REVIEWER: Heidi Bedwell, Land Use; Thomas McFarlane, P.E., Bellevue Development Services, Clearing & Grading Section

10. **Traffic Management:** As part of the right-of-way use permit, PSE shall ensure that access to residential and commercial properties is maintained at all times, except when restricted access is required for safety while work is occurring. At major driveways, flagger control may be needed to facilitate alternating enter and exit traffic. Special treatment will be needed for developments with split driveways (with one driveway serving entering traffic and one serving exiting traffic) if traffic cannot easily be shifted to the other driveway for two-way operation. The contractor will be required to coordinate with property owners when driveways or alleys are affected by construction.

AUTHORITY: BCC 14.30
REVIEWER: Tim Stever, Transportation/Right-of-Way

11. **Pavement Degradation:** As part of the right-of-way permit inspection process, pavement degradation identified by the City that results from increased Project-related construction truck traffic or excavation shall be fully restored upon completion of construction activities. This includes restoration of streets, curbs, gutters, sidewalks, parking lots, driveways, and traffic signal induction loops where appropriate.

AUTHORITY: BCC 14.30
REVIEWER: Tim Stever, Transportation/Right-of-Way

12. **Coordination with other utility providers affected by proposal:** PSE will coordinate with any affected utility providers, as appropriate, to determine how best to avoid or minimize any impacts while Project construction is occurring. The City of Bellevue will review project designs prior to permit approval to ensure protection of other utilities. PSE and its contractors will be required to develop construction sequence plans and coordinate schedules for utility work to minimize service disruptions and provide ample advance notice when service disruptions are unavoidable, consistent with utility owner policies. Relocation plans and service disruptions shall be reviewed and approved by the affected utility providers before construction begins. PSE will coordinate with the other utility providers to assist in their planning efforts for public

outreach to inform their customers of potential service outages and construction schedules.

AUTHORITY: LUC 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

13. **Field Verification of Utility Locations:** PSE shall follow regulatory requirements to field-verify utility locations such as gas lines or the Olympic Pipeline system. Field verification of the Olympic Pipeline system may include methods as directed by Olympic, such as potholing using vacuum truck excavation to avoid damage to the pipelines.

AUTHORITY: BCC 22.02.140.B.1, 22.02.140.C
REVIEWER: Heidi Bedwell, Land Use

14. **Pipeline Marking Prior to Construction:** PSE shall coordinate with Olympic to ensure that line marking personnel mark the entire length of Olympic's pipeline within 50 feet of any excavation or ground disturbance below original grade, and not only the location of angle points (points of intersection).

AUTHORITY: BCC 22.02.140.B.1, 22.02.140.C
REVIEWER: Heidi Bedwell, Land Use

15. **Grounding System:** Qualified licensed engineer shall verify separation distances between the transmission grounding system and the pipeline meets the recommendations in the Final Pipeline Interaction Assessment and Design Report after poles are installed. If grounding distances are not consistent with the recommendations, PSE shall reinstall grounding system to comply with the recommendations.

AUTHORITY: BCC 22.02.140.B.1, 22.02.140.C
REVIEWER: Heidi Bedwell, Land Use

16. **Olympic's General Construction Requirements:** PSE shall comply with the approved Construction Management and Access Plan including the identified measures from Olympic's General Construction and Right of Way Requirements for all work proposed near the pipelines.

AUTHORITY: BCC 22.02.140.B.1, 22.02.140.C
REVIEWER: Heidi Bedwell, Land Use

17. **Mitigation and Monitoring Report- Construction Management and Access Plan (Pipeline Safety):** Consistent with the approved Construction

Management and Access Plan, PSE shall document all mitigation measures implemented, monitored, and conducted.

PSE will file a mitigation and monitoring report with the City of Bellevue that documents consultations with Olympic and mitigation measures to address safety-related issues. PSE shall file the mitigation and monitoring reports with the City of Bellevue quarterly during construction. The reports shall identify any additional mitigation measures and monitoring that may be required as a result of PSE's coordination with Olympic.

The mitigation and monitoring report shall demonstrate that sufficient pipeline safety measures have been implemented, and document all consultations with Olympic, including the sharing of modeling, engineering, and as-built information with Olympic to assist Olympic in its ongoing monitoring and mitigation responsibilities. The report shall identify any additional field surveys and data collection necessary for verifying mitigation measures following project start-up, and any proposed monitoring to ensure that mitigation measures related to operational issues are followed.

AUTHORITY: BCC 22.02.140.B.1, 22.02.140.C
REVIEWER: Heidi Bedwell, Land Use

D. FOR THE LIFE OF THE PROJECT

1. **Water Quality Protection:** During maintenance activities (for substation, poles, the transmission line corridor, and access roads) PSE shall prevent spills or leaks of hazardous materials, paving materials, or chemicals from contaminating surface or groundwater.

AUTHORITY: Part 20.25H LUC
REVIEWER: Heidi Bedwell, Land Use

2. **Maintenance and Monitoring Program-Structural Stability:** PSE shall develop a monitoring and maintenance program that includes inspection and reporting on the ability of the transmission line poles to resist seismic disturbances. As part of PSE's regular inspection of the poles, it shall monitor all poles for changes in conditions that could reduce the ability of the structures to resist seismic disturbances. PSE shall submit reporting to the City of Bellevue. If changes are identified during inspection and monitoring of conditions, PSE shall implement additional measures to reduce or minimize those impacts.

AUTHORITY: Part 20.30P LUC, 20.20.255.G
REVIEWER: Heidi Bedwell, Land Use

3. **Telecommunication Facilities:** PSE shall limit the number of telecommunications facilities installed on the 230 kV poles to the seven locations currently installed in the corridor. Reinstalled facilities shall be in approximately the same locations as they were previously. Facilities shall be required to get City approval per current land use regulations before reinstalling telecommunication equipment.

AUTHORITY: LUC 20.20.255.G, 20.20.255.E.6
REVIEWER: Heidi Bedwell, Land Use

4. **Electromagnetic Fields:** In the event that radio frequency interference is found by a radio operator, PSE shall de-tune pole structures by installing hardware (such as arresters).

AUTHORITY: LUC 20.20.255.G, 20.20.255.E.6
REVIEWER: Heidi Bedwell, Land Use

5. **Pipeline Safety During Operation:** PSE shall work with Olympic to evaluate and implement appropriate mitigation measures to reduce electrical interference on the Olympic Pipeline system to safe levels.

PSE shall provide information to Olympic as appropriate or when requested by Olympic for Olympic to record AC pipe-to-soil potentials and DC pipe-to-soil potentials during its annual cathodic protection survey.

PSE shall provide Olympic with as much advance notice as practical of when outages are planned on the individual circuits (i.e., when only one circuit of the double circuit transmission lines is in operation) to allow monitoring of the AC induction effects on the pipelines.

PSE shall provide Olympic with data on anticipated maximum loads under peak winter operating conditions on an annual basis, and provide copies to the City of Bellevue to verify that this data has been provided to Olympic.

After the transmission line is installed and energized, Olympic is expected (due to its federal requirements to protect the pipeline from damage) to measure the actual AC interference with the pipeline in order to ensure that all AC interference risks have been fully mitigated under steady-state operation of the transmission line. PSE shall cooperate with Olympic in completing a post-energization AC site survey to determine if any adjustments are needed to Olympic's pipeline protection systems. This survey should cover the entire length of the new transmission line in the South Bellevue Segment. PSE shall provide load data for the survey, along with any design or as-built information requested by Olympic.

PSE shall monitor oil insulation for evidence of arcing and gassing, and monitor substations for evidence of overloading, overheating, or malfunctions.

PSE shall submit to the City of Bellevue, upon request by the City, documentation sufficient to show compliance with the provisions imposed by this Condition of Approval.

AUTHORITY: BCC 22.02.140.B.1, 22.02.140.C
REVIEWER: Heidi Bedwell, Land Use

XI. ATTACHMENTS

A. Project Plans
B. Alternative Siting Analysis
C. PSE South Bellevue Segment CUP Analysis
D. Independent Technical Analysis of Energize Eastside (USE 2015)
E. Vegetation Management Plan
F. Comprehensive Plan, Map UT-7
G. Comprehensive Plan Policy Analysis
H. Photo Simulations
I. Critical Areas Report
J. Pole Finishes Report-City of Bellevue (South)

Acronyms and Abbreviations

AC	alternating current
ADA	Americans with Disabilities Act
BCC	Bellevue City Code
BES	Bulk Electric System
BFE	Base Flood Elevation
BMPs	best management practices
CAG	Community Advisory Group
CALUP	Critical Areas Land Use Permit
CAP	Corrective Action Plan
CAR	Critical Areas Report
CENSE	Coalition of Eastside Neighborhoods for Sensible Energy
CSEE	Citizens for Sane Eastside Energy
CUP	Conditional Use Permit
DAHP	Department of Archaeology and Historic Preservation
dBA	A-weighted decibels
DC	direct current
DSD	Department of Development Services
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
ELF	Extremely Low Frequency
EMF	electromagnetic field
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GMA	Growth Management Act
I-90	Interstate 90
IARC	International Agency for Research on Cancer
IBC	International Building Code
IDP	Inadvertent Discovery Plan
KCHPP	King County Historic Preservation Program
kV	kilovolt
LHNA	Lake Hills Neighborhood Association
LUC	Land Use Code
MW	megawatt
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
NPDES	National Pollutant Discharge Elimination System

NRHP	National Register of Historic Places
OATT	Open Access Transmission Tariff
OPGW	Optical Ground Wire
PGIS	pollution-generating impervious surface
PHMSA	Pipeline and Hazardous Materials Safety Administration
PSE	Puget Sound Energy
PSRC	Puget Sound Regional Council
RCW	Revised Code of Washington
ROW	right-of-way
SCL	Seattle City Light
SEPA	State Environmental Policy Act
SF	square feet
SF6	sulfur hexafluoride
SPCC	Spill Prevention, Control, and Countermeasure
SPPP	Stormwater Pollution Prevention Plan
TESC	temporary erosion and sediment control
USE	Utility System Efficiencies, Inc.
UTC	Utilities and Transportation Commission
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WECC	Western Electricity Coordinating Council
WHO	World Health Organization
WTD	Wastewater Treatment Division

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