Attachment I



CRITICAL AREAS IMPACT ASSESSMENT & MITIGATION PLAN

2302 ALABAMA STREET
PARCEL #380320540078
BELLINGHAM, WA

AUGUST 2024

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EXECUTIVE SUMMARY

Northwest Ecological Services, LLC (NES) was retained to prepare an impact assessment and mitigation plan for a single-family residence project located at 2302 Alabama Street (parcel #380320540078), in the city of Bellingham, Washington. This report summarizes existing conditions, analyzes proposed impacts, and presents mitigating actions based on the current project design that will protect existing stream habitat and enhance associated buffer functions in accordance with applicable environmental regulations.

All information contained in this report is based on available information and site conditions at the time of the site visit(s). This report is intended for inclusion with future wetland, stream, and wildlife habitat permit applications to the City of Bellingham (COB), Washington State Department of Ecology (Ecology), Washington State Department of Fish and Wildlife (WDFW), and the U.S. Army Corps of Engineers (Corps), as may be required.

The subject parcel was reviewed for critical areas by NES in December of 2023 and January of 2024. A Critical Areas Assessment memo documenting site conditions was completed by NES in January of 2024. Fever Creek, a perennial, fish-bearing stream was identified along the eastern and southern boundary of the subject parcel.

Fever Creek is expected to be under the jurisdiction of the COB, WDFW, Ecology, and the Corps. Fever Creek is regulated by the COB critical areas ordinance (CAO) as a Habitat Conservation Area (HCA). The COB requires a buffer around regulated HCAs to protect functions. As a fish-bearing stream, Fever Creek is anticipated to require a 75-ft standard buffer.

COB mapping indicates a frequently flooded area along the creek; however no FEMA special flood hazard areas are mapped in the vicinity. The frequently flooded area appears to be limited to the area within the steep banks of the stream which are also defined as an Erosion Hazard Area by city code (Element Solutions, 2024). A building setback of 20 feet is recommended by the project geotechnical evaluation.

No wetlands or shorelines of the state are located on site or in the immediate vicinity.

The proposed project includes construction of a single-family residence (SFR) with two attached accessory dwelling units (ADU) and associated infrastructure. The majority of the subject parcel is encumbered by the buffer associated with Fever Creek. The proposed project requires a reduction of the stream buffer beyond the 25 percent reduction allowed by the CAO. As this literal interpretation of the CAO would deprive the property owners of reasonable use of the subject parcel, a variance request from code is proposed. Additionally, an administrative reduction to the standard 15-ft building setback is also proposed in order to minimize buffer impacts.

The project proposes a total of 4,020 square feet (sq. ft.) of permanent stream buffer impacts to accommodate the residential development. Proposed buffer impacts will be mitigated at a ratio exceeding 1:1 minimum required by City Code for a total of 4,550 sq. ft. of stream buffer

enhancement. Buffer enhancement will include installation of dense native vegetation within currently degraded portions of the on-site stream buffer, down gradient of the proposed development. The proposed enhancement is anticipated to offset all critical area impacts. Furthermore, the project is expected provide ecological functional uplift above the existing low-functioning condition of the site.

The buffer enhancement areas will be maintained and monitored for a period of five years per COB Code. Split-rail fencing and a native growth projection area sign will be placed along the boundary of the mitigation area for protection. The retained buffer areas will be placed in a permanent conservation easement recorded with the Whatcom County auditor's office.

NES QUALIFICATIONS

NES is a specialized service-oriented environmental consulting firm based in Bellingham, Washington. We provide a range of biological services to both the public and private sectors. Our services include wetland assessments, biological assessments, wetland restoration and mitigation plans, natural resource analysis, environmental regulatory compliance, landscape and ecological design, and environmental impact assessment of plants, animals, fish, and sensitive habitats. NES professionals have performed wetland and biological assessments over 36,500 acres [1991-2023] in Whatcom, Skagit, Island, and San Juan counties.

NES staff qualifications summary:

- Molly Porter is an ecologist with NES and has provided environmental services within the north Puget Sound area since 2004. Ms. Porter obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University (WWU). She is certified through SWS as a PWS, #2064.
- Collin Van Slyke is an ecologist with NES, providing environmental services for projects throughout north Puget Sound since 2014. Mr. Van Slyke obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at WWU. He is certified through SWS as a PWS, #3129.
- Candice Trusty is an ecologist with NES, providing environmental services within the north Puget Sound since 2019. Ms. Trusty obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at WWU. She is certified through SWS as a WPIT.
- Meg Harrison is an ecologist with NES. Ms. Harrison obtained her Bachelor of Science in Environmental Science from Montana State University with an emphasis in Soil Science. Ms. Harrison has over 5 years of experience in environmental consulting for the federal government and private firms as a staff scientist and wildlife biologist. Meg has completed the USACE Wetland 40-hr Delineation course and is certified through SWS as a WPIT.
- Ellie Aosved is an ecologist with NES. Ms. Aosved obtained a Bachelor of Arts in Biology from Pacific Lutheran University. Her experience includes marine and freshwater organism identification, marine and terrestrial botany, and wetland monitoring for state agencies.

DISCLAIMER

Wetland, stream, and lake delineations and determinations are based upon protocols defined in manuals and publications produced by federal, state, and local agencies. The wetland methodology used in this report is consistent with methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast* Region (Corps, 2010) and the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), as required by WAC 173-22-035.

Mitigation plans are developed to meet local regulations. This plan requires local agency concurrence prior to implementation. The recommendations are based on conditions at the time of the site visit(s) and development plans provided by the Client and Client representatives. Although the plan is carefully designed to facilitate success, no guarantees are given that the project will meet all performance standards. Project success depends on many unforeseen and uncontrollable events, achieving success can be greatly improved through:

- Ensuring a qualified ecologist is on site during mitigation project construction
- Installing the mitigation project as specified in this report
- Maintaining the mitigation project as specified in this report (ideally by a landscape professional that specializes in restoration and/or wetland mitigation)
- Implementing any recommended contingency measures in a timely manner

Findings within this report are based on observations of conditions at the time of the stated site visit(s). This report is provided for the use of the named recipient only and is not intended for use by other parties for any other purpose. This report does not guarantee agency concurrence or permit approval.

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1.0 INTRODUCTION

1.1 Scope of Work

Northwest Ecological Services, LLC (NES) was retained to prepare an impact assessment and mitigation plan for a project in the city of Bellingham, Washington. This report summarizes existing conditions, analyzes proposed impacts, and presents mitigating actions based on the current project design that will protect existing stream habitat and enhance associated buffer functions in accordance with applicable environmental regulations.

All information contained in this report is based on available information and site conditions at the time of the site visit(s). This report is intended for inclusion with future wetland, stream, and wildlife habitat permit applications to the City of Bellingham (COB), Washington State Department of Ecology (Ecology), Washington State Department of Fish and Wildlife (WDFW), and the U.S. Army Corps of Engineers (Corps), as may be required.

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1.2 Project Location

The proposed project is located at 2302 Alabama Street (parcel #380320540078), in the city of Bellingham, Washington (Section 20, Township 38N, Range 03E, W.M.). The subject parcel is located south of Alabama Street, within the City limits (Figure 1- all referenced figures are located in Appendix B).

1.3 Project Overview

The proposed project includes construction of a single-family residence (SFR) with two attached accessory dwelling units (ADU) and associated infrastructure. The proposed site plan is detailed in Figure 2. The majority of the subject parcel is encumbered by the buffer associated with Fever Creek, as shown in Figure 3. Literal interpretation of the COB critical areas ordinance (CAO) would deprive the property owners of reasonable use of the subject

parcel, therefore a variance request from code is proposed. The proposed project includes the following elements:

- Residence and Attached ADUs. The proposed two-story, SFR and two attached ADUs will have a combined footprint of 1,415 square feet (sq. ft.) in total. This footprint is consistent with the average size of single-family residences within this neighborhood, and well below the average when including multifamily developments, as determined by a housing analysis described in Section 3.3.
- Access and Parking. A concrete driveway is proposed off Alabama Street, providing access to the SFR and ADUs. Concrete parking with a turnaround and a covered parking area will be installed between the proposed residence and Alabama Street. A concrete pathway is proposed west of the SFR, providing access to the SFR. The cement driveway, parking, turnaround, and path have a combined footprint of approximately 1,800 sq. ft. in total.
- Building Setback. Per City staff recommendation, the proposal reduces the standard 15-ft building setback from the retained stream buffer and will have a 10-ft building setback to the south and a 5-ft setback to the east. The building setback areas will have an approximate total footprint of 940 sq. ft., will be utilized as lawn/landscaping, and will be fully mitigated.

  The project adheres to the 20-ft building and 10-ft clearing setbacks from the stream, as recommended in the geotechnical assessment.
- Utilities. Utilities will connect to the City infrastructure along Alabama Street.
- Stormwater. The cement driveway will be sloped north towards Alabama street where a City stormwater catch basin exists. The remainder of the site will retain existing surface runoff flow paths to the east and south, and stormwater will be dispersed into the stream buffer.
- Stream Buffer Impact. A total of 4,020 sq. ft. of permanent stream buffer impact will result from the proposed project. This impact area includes all proposed impervious surfaces within the buffer as well as the retained building setback areas, as shown in Figure 4.

  Any temporary disturbances within the buffer will be limited to areas currently existing as lawn, which are scheduled to be enhanced with native vegetation as part of the compensatory mitigation project after completion of exterior construction.
- Compensatory Mitigation. The remaining on-site stream buffer, in areas with the potential for functional uplift, will be enhanced for a total of 4,550 sq. ft. of buffer enhancement. Enhancement will include removal of noxious weeds and densely planting native trees, shrubs, and herbaceous vegetation.

  Wildlife-permeable split-rail fencing and native growth protection area (NGPA) signage will be installed along the outer boundary of the mitigation area for protection, as shown in Figure 4. The retained buffer areas will be placed in a

permanent conservation easement recorded with the Whatcom County auditor's office. All mitigation areas will be maintained and monitored for a period of five years per COB Code.

2.0 BASELINE INFORMATION

The subject parcel was reviewed for critical areas by NES in December of 2023 and January of 2024. A Critical Areas Assessment memo documenting site conditions was completed by NES in January of 2024. The following is a summary of observations from that memo, for more detail please refer to the original document (NES, 2024). A map of the existing site conditions is included as Figure 3.

2.1 Existing Conditions

The subject parcel is bound by Alabama Street to the north, a single-family residence to the west, and multi-family residences to the east and south. The subject parcel was previously developed with a single-family residence in the northwest portion of the site, which burned down and was removed sometime between 2013 and 2014. The parcel is currently undeveloped aside from the old, compacted gravel driveway that has grown over with grass and a small set of cement stairs along the sidewalk adjacent to Alabama Street. The parcel and vicinity are zoned for multi-family residential uses.

The subject parcel is within the Whatcom Creek watershed and Fever Creek subbasin. Fever Creek flows from north to south along the eastern and then west along the southern boundary of the parcel. The site slopes down from Alabama Street south to the creek at an approximately 6-7 percent gradient. The northern portion of the site is relatively flat, in the area of the previous house site, then slopes down to the creek.

The majority of the northern portion of the parcel lacks trees and shrubs and is currently maintained as lawn. The lawn consists of red fescue (*Festuca rubra*), bluegrass (*Poa sp.*), orchard grass (*Dactylis glomerata*), velvet grass (*Holcus lanatus*), dandelion (*Taraxacum officinale*), clover (*Trifolium sp.*), hairy cat's ear (*Hypochaeris radicata*), vetch (*Vicia sp.*), creeping buttercup (*Ranunculus repens*), and moss. Two Douglas fir (*Pseudotsuga menziesii*) and an apple tree exist along the northern parcel boundary, in the lawn area.

The remainder of the site is vegetated with a variety of trees and shrubs and contains Himalayan blackberry (*Rubus armeniacus*) interspersed throughout, in some areas forming dense patches. Trees observed onsite include black cottonwood (*Populus balsamifera*), one large shore pine (*Pinus contorta*), apple trees (*Malus fusca*), and bitter cherry (*Prunus emarginata*). The understory is dominated by blackberry but also includes snowberry (*Symphoricarpos albus*), Nootka rose (*Rosa nutkana*), English holly (*Ilex aquifolium*), red osier dogwood (*Cornus sericea*), sword fern (*Polystichum munitum*), creeping buttercup, horsetail (*Equisetum arvense*), and the grass species mentioned above.

2.2 Wetlands

No wetlands exist within the subject parcel or immediate vicinity.

2.3 Habitat Conservation Areas (HCAs)

Fever Creek

NES delineated the ordinary high-water mark (OHWM) of Fever Creek, located along the eastern and southern boundary of the subject parcel (Figure 3). Fever Creek is perennial and considered fish-bearing. For greater detail on the characteristics and functions of Fever Creek, please see Section 3.5 of this report or the original Critical Areas Assessment memo (NES, 2024).

Lakes and Ponds

No lakes or ponds were observed or are mapped within the immediate vicinity of the review area.

Wildlife

NES did not observe any state or federally Threatened, Endangered, or Candidate species, or state Priority species, within the subject parcel or immediate vicinity. No Priority habitat, aside from Fever Creek, were observed within the parcel or vicinity. No COB mapped Important Wildlife Habitat Areas or Important Wildlife Corridors are mapped within the vicinity of the review area.

Wildlife usage of the site is likely limited due to the surrounding roadways and high-density residential development. Overall, the site contains suitable foraging habitat and refugia for wildlife species that are well adapted to the urban environment such as deer, songbirds, raptors, and other small mammals (squirrels, racoon).

2.4 Frequently Flooded Areas

COB mapping indicates a frequently flooded area along the creek; however no FEMA special flood hazard areas are mapped in the vicinity. The frequently flooded area appears to be limited to the area within the steep banks of the stream, approximately six feet below the proposed development site.

2.5 Regulatory Summary

Table 1 summarizes critical areas identified by NES within the vicinity of the subject parcel.

Table 1. Critical Areas Summary

Feature	Stream Type	Regulatory Authority				Regulated Buffer (ft)
		City of Bellingham	Corps	Ecology	WDFW	
Fever Creek	F	X	X	X	X	75

2.5.1 City of Bellingham

The COB critical areas ordinance (CAO) states that no activity may be conducted within a regulated wetland, stream, or buffer without critical areas review and approval. Fever Creek is under the jurisdiction of the COB CAO as a Habitat Conservation Area (HCA). The COB requires a buffer around regulated HCAs to protect functions. **As a fish-bearing stream, Fever Creek is anticipated to require a 75-ft standard buffer.**

The COB requires that buildings and other structures be set back a minimum of 15 feet from the edge of critical area buffers, or from the critical areas where no buffer is required (BMC 16.55.340(G)). Uses allowed within the building setback include: landscaping; uncovered decks; building overhangs; impervious surfaces such as driveways, roads, parking lots, and patios, provided that they conform to applicable water quality standards and that construction equipment does not enter or damage the buffer or critical area. Clearing and grading, and wells are also allowed within the setback.

The proposal requests a reduction of the standard 15-ft building setback (Figure 2). Very little undisturbed habitat exists on site and no large trees with root zones exist within the reduced building setback. The edge of the buffer adjacent to the proposed development will be replanted with native shrubs species which do not require a 15-ft wide rootzone. Therefore buffer impacts will be minimized by reducing the building setback between the proposed development and the enhancement buffer.

2.5.2 Federal and State

Activities altering wetlands, streams, and other regulated water bodies may require permit authorization from the Corps under Section 404 of the federal Clean Water Act (CWA) (33 U.S.C. § 1251 et seq.) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 401). Fever Creek is a perennial stream and tributary to Whatcom Creek which flows into Bellingham Bay (a TNW), and is anticipated to be regulated by the Corps.

Ecology has authority over discharge into all wetlands (including isolated wetlands) and streams and can impose buffers and compensatory mitigation for impacts. Ecology reviews all permits received by the Corps for 401 Water Quality Certification. Ecology requires an "individual" review of all wetland disturbances greater than one-half acre or those that require additional review. Water Quality Certification is required for all Individual Permit applications.

WDFW requires issuance of a Hydraulic Project Approval (HPA) prior to any activities that may directly or indirectly affect streams or associated wetlands. The WDFW is anticipated to regulate activities occurring below the OHWM of Fever Creek, as it meets the definition of a "water of the state" (RCW 77.55.011(26).

Only the aforementioned agencies have the authority to make jurisdictional determinations; however no direct impacts to Fever Creek are proposed, therefore state and federal agencies are not expected to assert jurisdiction over the proposed project.

3.0 IMPACT ASSESSMENT

3.1 Site Plan

As previously described in Section 1.3, the proposed project includes construction of a two-story single-family residence with two attached ADUs and access/parking. The proposed site plan is detailed in Figure 2. The majority of the subject parcel is encumbered by the buffer associated with Fever Creek (Figure 3). Therefore, a variance from the critical areas ordinance code is requested, as detailed in Section 3.3.

3.2 Mitigation Sequencing

The COB CAO requires projects demonstrate adherence to a specific sequence of actions termed "mitigation sequencing" before impacting regulated critical areas (BMC16.16.250). The proposed project applied mitigation sequencing, as detailed below.

Avoid. The proposed project avoids direct impacts to Fever Creek. However, the stream buffer extends across the majority of the site and buffer impacts are unavoidable if residential development is to occur on site.

Minimize. The proposed development is sited in the northwest corner of the subject parcel, as far away from the stream as practicable, and utilizes all of the small amount of area on site that is outside of the stream buffer. The development is sited in buffer areas that are currently in poor condition, lack trees and shrubs, and was previously the site of a single-family residence. This location minimizes grading and ground disturbance. One deciduous street tree is proposed for removal, which is located outside of the stream buffer. The applicant has gone through several project designs in order to minimize buffer impacts to the greatest extent feasible while also providing dense housing on site.

The proposed project meets all stormwater requirements and Best Management Practices (BMPs) will be used during the construction process to minimize potential temporary water quality impacts.

Rectify. All areas of temporary buffer disturbance resulting from construction will be revegetated as part of the compensatory mitigation project after exterior construction is completed.

Reduce through preservation. A conservation easement will be filed over the retained on-site creek and buffer areas for preservation in perpetuity. Signage and fencing will be installed along the outer boundary of the retained buffer areas on site for further protection.

Compensate. The proposed project will provide on-site stream buffer enhancement exceeding the 1:1 (impact to mitigation) ratio required by City code. The proposed enhancement is anticipated to offset all critical area impacts. Furthermore, the project is expected provide ecological functional uplift of the site above the existing low-functioning condition of site.

3.3 COB CAO Compliance and Variance Request

Due to the small size of the subject parcel and extent of stream buffer over the lot, literal interpretation of the CAO would not allow for a buffer reduction sufficient for reasonable residential development on the site. Therefore, a variance from the CAO is requested in order to reduce the stream buffer beyond 75 percent of the standard 75-ft buffer required for Fever Creek (16.55.500[D(3)]). According to the CAO, a variance may be granted if the applicant demonstrates that they can meet the criteria outlined in section 16.55.120(B). The following is a summary of the criteria and a description of how the project meets each requirement:

1) **Special conditions and circumstances exist that are particular to the site.**

   The subject parcel is almost entirely encumbered by stream buffer, resulting in a legally-existing non-conforming lot. There is not sufficient area outside of the buffer for residential development and a buffer reduction allowable by code would not provide sufficient area for reasonable use of the site. The parcel is a legal lot of record with zoning for multi-family residential development. However, no residential development can be permitted on site without a variance from the CAO.

2) **The special conditions do not result from the action of the applicant.**

   The subject parcel has been a legal lot of record since 1902. Fever Creek has been historically manipulated and confined within the existing channel. The timeframe for when this confinement occurred is unknown, however, it took place long before the applicant took ownership of the parcel in 2024.

3) **A literal interpretation of the CAO would deprive the applicant of all reasonable use of the property and the requested variance is the minimum necessary to provide such rights.**

   There is insufficient area outside of the buffer for residential development and a 25% administrative buffer reduction allowable by code [BMC 16.55.500(D)((3)(b)] would not provide sufficient area for reasonable use of the site. A 25% buffer reduction leaves only 14 feet of space between the buffer and the required 5-ft side yard setback. BMC 16.55.340 requires a 15-ft building setback from the edge of the buffer, which leaves no room for development at all. The building setback may be reduced administratively, but that would still leave less than 14 feet for a development, which is impractical and poses an undue hardship. Therefore, the literal interpretation of the CAO would deprive the applicant of reasonable use of the property which is intended for residential use.

   The intent of the proposed project is to provide housing within a medium-density residential area, as identified by the Roosevelt Neighborhood Plan. The project has undergone several design changes in order to minimize buffer impacts while also providing medium-density housing. The proposed two-story, SFR and two attached ADUs will have a combined footprint of 1,415 square feet (sq. ft.) in total. This footprint is consistent with the average size of single-family residences within this neighborhood (1,415 sf), and well below the average surrounding multifamily

developments (2,587 sf). The proposed single-family design is the minimum necessary to provide reasonable use of the subject property which is zoned for multi-family residential development.

4) **Granting the variance will not confer on the applicant any special privileges that are denied to other lands in similar circumstances.**

A housing analysis was conducted by NES to determine the use and average footprint of residential development in the immediate vicinity (300-ft radius) of the subject parcel. A total of 30 properties were reviewed. Based on the data collected from the parcels assessed, the following was determined (data included in Appendix C):

- 57 percent of the parcels assessed are single-family residences, 43 percent are either duplex, 3plex, 4plex, or other multi-unit residential.
- The average single-family residential footprint is 1,415 sq. ft.
- The average multi-family residential footprint is 2,587 sq. ft.

The proposed single-family residence and ADUs have a combined footprint of 1,415 sq. ft. total, the average size for one home in the neighborhood. The proposed use is in line with the single and multi-family residential uses in the neighborhood.

Adjacent developments are located as close as 12 ft from the creek. The proposed residence is located 20 ft form the creek at the closest point to the east and 52.5 ft to the south.

Therefore, no special privileges are being granted to the applicant with the proposed project.

5) **Granting a variance is consistent with the general purpose of CAO. It does not have a significant adverse impact on functions and values of critical areas and is not otherwise detrimental to public welfare.**

The on-site buffer of Fever Creek lacks a dense, native vegetation community. The proposed development site lacks trees and shrubs and currently exists as maintained lawn with compacted soils and remnants from previous development on site. The remaining buffer areas on site either also exist as lawn or are dominated by noxious vegetation, primarily Himalayan blackberry. The existing buffer conditions are considered disturbed and provide minimal protection for the stream.

Through buffer enhancement associated with the proposed project, a net increase in buffer functions is anticipated on site. The area of development will be mitigated at a ratio greater than 1:1 with buffer enhancement. The enhancement areas will be densely planted with native trees, shrubs, and herbaceous vegetation to provide increased water quality improvement and hydrologic and habitat function. Therefore, with the proposed mitigation, the requested variance will be consistent with the CAO as no net loss of buffer functions (and potentially a net increase) is anticipated from the proposed project. The Impact Analysis in Section 3.5 provides greater detail on how the proposed enhancement will offset impacts to buffer functions.

The proposal is not detrimental to public welfare. There is housing supply shortage in Bellingham. Increasing supply and density in residentially zoned areas is consistent with the goals of the Comprehensive Plan for this neighborhood.

6) **The decision to grant the variance includes best available science and gives special consideration to conservation or protection measures to preserve or enhance fish habitat.**

   The impact analysis was conducted using best available science on buffer functions and how they support stream function. No in-water work will occur with the proposed project; however, the proposed buffer enhancement is anticipated to improve the water quality of runoff entering Fever Creek and will improve thermal protection of the stream overtime as the installed vegetation matures. The retained and enhanced buffer areas will be placed into a conservation easement to be protected in perpetuity. Therefore, with the proposed mitigation, the variance will provide for preservation and enhancement of fish habitat.

7) **Granting the variance is consistent with the general purpose and intent of the comprehensive plan and adopted development regulations.**

   The proposed project will result in increased housing density within the Roosevelt Neighborhood, an area planned for multifamily residential, medium density housing. Furthermore, the project provides ADA accessible housing, while also enhancing and permanently protecting stream habitat. Therefore, granting the variance is consistent with the general purpose and intent of the comprehensive plan and adopted neighborhood plan regulations which identifies "enhancement projects on Fever Creek are needed."

3.4 Proposed Critical Areas Impacts

3.4.1 Stream Impacts

No direct stream impacts are proposed.

3.4.2 Stream Buffer Impacts

A total of 4,020 sq. ft of permanent stream buffer impacts are proposed. Buffer impacts are shown in Figure 4.

3.5 Impact Analysis

The following sections detail the functions provided by the on-site buffer in the existing condition, describes the potential impacts to buffer functions from the proposed project, and provides an analysis of how the proposed mitigation will result in no net loss of stream buffer functions.

3.5.1 Existing Buffer Functions

The on-site buffer of Fever Creek lacks a dense, native vegetation community. The proposed development area lacks trees and shrubs and currently exists as maintained lawn with compacted soils and remnants from previous development on site (compacted gravel driveway and concrete staircase). The remaining buffer areas on site either also exist as maintained lawn or are dominated by noxious vegetation, primarily Himalayan blackberry. Vegetated areas along the eastern and southern portion of the site contain some native trees and shrubs, however, Himalayan blackberry is dispersed throughout and forms dense patches in some areas.

For these reasons, the existing buffer conditions are considered disturbed and are providing minimal protection of stream function. Lawn areas allow for some degree of rainwater infiltration and stormwater filtration. However, compacted soils and gravel and mowing significantly reduce these water quality improving and hydrologic functions. Areas containing trees and shrubs are providing these functions to a greater degree through interception of rainwater, filtering of suspended solids within surface runoff, slope stabilization, and thermal protection of stream surface water by shading. However, these functions are generally improved with increased density of vegetation and a multi-layered canopy.

The existing buffer provides some degree of wildlife habitat function. Due to the lack of development on site, the open lawn provides a forage area for urban deer. Areas containing trees and shrubs provide forage and refugia for urban wildlife species including deer, songbirds, rabbits, racoon, and other small mammals and invertebrates. However, the site is within a highly developed area along an arterial street and is disconnected from areas of quality habitat and is therefore only suitable for wildlife well adapted to human presence. The dominance of non-native vegetation within the understory also limits habitat niches and forage opportunities for wildlife, particularly songbirds which rely on invertebrates adapted to native plant species.

Fever Creek is a heavily modified stream, meandering through the Roosevelt neighborhood and light industrial land uses surrounding Iowa Street. Much of the stream is ditched or piped underground via the City stormwater system, including culverting for over one half mile upstream of the confluence with Whatcom Creek. Fish are not anticipated to utilize the on-site reach of Fever Creek due to multiple downstream fish blockages. However, the stream is still considered to be "fish bearing" due to the channel morphology capability of supporting fish populations and connectivity to other fish-bearing waters (Whatcom Creek). Fever Creek is also 303(d) listed by Ecology as an impaired water body for high levels of zinc and fecal coliform bacteria, and low levels of dissolved oxygen. Areas down-gradient of Fever Creek have experienced damage due to flooding.

3.5.2 Water Quality/Runoff Filtration

Potential Impact:

The proposed project will increase the amount of impervious surfaces on site which will result in an increase in surface runoff and associated pollutants. However, the proposed project will be

developed entirely within existing compacted lawn areas and no woody vegetation will be removed from the buffer. Due to the disturbed vegetation and soil conditions in this area, stormwater generated from the site is not anticipated to increase significantly compared to existing conditions. Most stormwater from the proposed development will be dispersed into the buffer of Fever Creek, with a smaller portion entering the City stormwater system. The increase in stormwater generation on site has the potential to contribute to cumulative water quality impairments within the watershed due to development.

As with all projects, temporary disturbances for clearing and grading have the potential to increase turbidity during construction. Construction BMPs and temporary erosion and sediment control (TESC) measures are expected to minimize the potential for temporary erosion and sedimentation.

Mitigated Determination:

Proposed mitigation includes installation of native trees, shrubs, and herbaceous vegetation within the buffer of Fever Creek, down gradient of the proposed development. Increasing the density of vegetation within the stream buffer is anticipated to improve filtration of runoff before it flows into the stream. Additionally, soil decompaction within the buffer enhancement areas is anticipated to improve infiltration of runoff entering the buffer areas.

Therefore, with the proposed mitigation, no net loss of buffer water quality functions is anticipated with the proposed project and the project is not anticipated to have a significant contribution to cumulative water quality impairment within the subbasin.

3.5.3 Thermal Protection

Potential Impact:

Riparian vegetation provides shade to streams and helps regulate surface water temperatures. The proposed project will not remove woody vegetation from the stream buffer. Therefore, no impacts to this buffer function is anticipated from the proposed project.

Mitigated Determination:

Proposed mitigation includes installation of native trees, shrubs, and herbaceous vegetation within the stream buffer. As this vegetation matures it is anticipated to increase shading of the stream and contribute to the thermal regulation and cooling of the stream. Therefore, with the proposed mitigation, a net increase in the thermal regulatory functions is anticipated with the proposed project.

3.5.4 Hydrology

Potential Impact:

The proposed project will increase the amount of impervious surfaces on site which will result in an increase in surface runoff. However, the proposed project will be developed entirely within existing compacted lawn areas and no woody vegetation will be removed from the buffer. Therefore, due to the disturbed vegetation and soil conditions in this area, stormwater generated from the site is not anticipated to increase significantly compared to existing

conditions. Stormwater from the proposed development will be dispersed into the stream buffer. The increase in stormwater generation on site has the potential to contribute to cumulative impacts lower in the subbasin during storm events including stream bank erosion, flooding, and velocity of peak flows.

Mitigated Determination:

Proposed mitigation includes installation of native trees, shrubs, and herbaceous vegetation within the stream buffer, down gradient of the proposed development. Increasing the density of vegetation within the stream buffer is anticipated to impede surface water flows thereby slowing the velocity of runoff and allowing for increased infiltration into the soils. Soil decompaction within the buffer enhancement areas is also anticipated to improve infiltration of runoff entering the buffer areas before reaching Fever Creek. Once installed vegetation begins to mature, a multi-layered canopy is anticipated to develop. Layers of vegetation is anticipated to increase interception of rainwater and allow for greater infiltration and higher rates of evapotranspiration.

Therefore, with the proposed mitigation, no net loss of buffer hydrologic functions is anticipated with the proposed project and the project is not anticipated to contribute to erosion and flood damage down gradient.

3.5.5 Wildlife Habitat

Potential Impact:

Conversion of lawn areas to development and increased use and human presence on site is anticipated to reduce wildlife use of the site. However, due to the position of the site within a highly developed landscape, the proposed development is not anticipated to change the types of wildlife that utilize the site, which is already limited to species with a high tolerance for human disturbance. The proposed development will not remove woody vegetation from the stream buffer, therefore, no high-quality habitat features will be removed from the site.

Mitigated Determination:

Proposed mitigation includes installation of native trees, shrubs, and herbaceous vegetation and removal of noxious vegetation within the stream buffer. The proposed enhancement will increase native vegetative species diversity and structural complexity on site and is anticipated to support a wider range of wildlife species, primarily songbirds. As the installed vegetation becomes established it is anticipated to increase screening of the Fever Creek corridor from adjacent development and Alabama Street. Deer and other urban mammals are anticipated to continue using the site after construction, but will have increased habitat condition due to the diversity in vegetation species and structure.

Therefore, with the proposed mitigation, no net loss of buffer habitat functions is anticipated with the proposed project. The proposed project will not contribute to habitat fragmentation or sever wildlife movement corridors.

3.5.6 Impact Summary

Overall, with the proposed mitigation, no net loss of stream buffer functions is anticipated to result from the proposed project. The development is proposed in an area that is currently degraded due to previous development on site and is providing limited buffer functions. The proposed mitigation detailed below serves to enhance buffer functions on site to offset all potential adverse impacts from the development.

4.0 MITIGATION

4.1 Mitigation Strategy

The following is a summary of the proposed on-site mitigation, as depicted in Figure 4.

- Buffer Enhancement. Approximately 4,550 sq. ft. of the retained on-site stream buffer will be enhanced. The proposed enhancement area is greater than the 1:1 (impact to mitigation) ratio required by the CAO. Buffer enhancement will occur in all degraded buffer areas down-gradient of the proposed development including existing lawn areas and vegetated areas inhibited by Himalayan blackberry. The following actions shall occur within the retained buffer in order to off-set potential project impacts:
    - Remove invasive species within the buffer, primarily Himalayan blackberry. Removal shall occur prior to planting, per specifications detailed below in Section 4.2.3.
    - Buffer areas not currently containing native woody vegetation will be decompacted to promote successful plant establishment and increase infiltration of rain and surface runoff.
    - Enhancement areas will be planted with the native tree, shrub, and herbaceous species specified in Table 2 in the following section.
- Site Protection. The following measures are proposed to ensure permanent protection of the retained stream buffer:
    - Split-rail cedar fencing (or an approved wildlife permeable alternative) shall be installed along the outer boundary of the retained buffer areas, as shown in Figure 4.
    - One Native Growth Protection Area (NGPA) sign shall be installed on the fencing, as shown in Figure 4.
    - The retained on-site stream buffer shall be placed in a permanent conservation easement recorded at the Whatcom County auditor's office prior to occupancy building permits.

4.2 Mitigation Installation Methods and Procedures

4.2.1 Contractor Qualifications

Actions and tasks defined in this Mitigation Plan (including site preparation and planting) shall be either:

1) Conducted by a qualified contractor that can demonstrate a minimum of five years of experience with restoration or wetland mitigation installation projects in Whatcom County. They must be able to provide an on-site staff member that can identify native plants. Biological oversight is only needed by the project biologist as specified in this Mitigation Plan.
2) If the applicant proposes to install mitigation themselves, or the contractor does not meet above qualification, the applicant shall hire a qualified PWS to provide oversight during all material placement and plant installation activities.

The mitigation installer shall contact NES or the project biologist prior to start of work.

4.2.2 Site Preparation

Thorough site preparation is vital to project success. All site preparation tasks (mitigation or otherwise) must be conducted in coordination with NES or another qualified ecologist. The following are the required construction tasks associated with the compensatory mitigation:

- Construction Fence/Silt Fence. Construction work limits shall be clearly marked with orange construction fencing and silt fencing **prior to clearing, grading, and/or excavation.** Alternatively, the orange construction fence may be eliminated if the contractor installs an orange silt fence. The fences will help provide water quality protection and define the active work area. Fences must be removed once construction is complete and erosion is stabilized. Compost and/or mulch berms may be used in some areas in lieu of silt fencing. However, construction fencing may not be used as a substitute.

  During construction, if any disturbance occurs outside the work limits, NES shall be notified to conduct an assessment. The contractor, in coordination with NES, shall restore the disturbed area to naturally occurring grades with the goal of restoring pre-construction surface storm flows as much as possible and protecting soil conditions/ compaction.
- Dry Conditions. Equipment use within the mitigation areas shall be conducted when soils are dry and precipitation events are minimal.
- Equipment Maintenance. Equipment shall be maintained in good working condition such that petroleum products or other harmful chemicals are not leaked into the mitigation area/stream buffer.
- BMPs. The contractor shall adhere to the BMPs outlined in this mitigation plan and any other BMPs listed in the construction documents. These may include, but are not limited to, silt fences, mulch or compost berms, straw rolls, temporary construction entrances, catch basin inserts, and tree protection.

- Tree Retention. No tree removal is currently scheduled. If hazard trees in the buffer are identified, COB staff and/or the project ecologist shall be consulted prior to removal to discuss options, which will likely include cutting into snags rather than removal.

4.2.3 Invasive Plant Control

All invasive vegetation must be removed from the mitigation areas prior to plant installation. Failure to remove all blackberry canes and root wads will make control of this invasive species much more difficult during the monitoring period and may result in overall project failure.

- Himalayan blackberry (Class C). Thickets shall be cut down during the summer when soils are dry. Root wads should be manually dug up in the fall prior to plant installation.
- English Holly. Root wads should be either entirely dug up or stems shall be cut and Glyphosate swabbed directly onto the cut stalk (not sprayed).
- Remove any other plants identified on the 2024 Whatcom County Noxious Weed List.

Do **NOT** remove native vegetation, all native woody vegetation will count toward total cover for the mitigation performance standards.

4.2.4 Soil Amendments

Compacted soils have the potential to inhibit the spread of roots and may eventually result in trees toppling. Soil decompaction should occur within enhancement areas that currently exist as lawn, or where soils are compacted and no native woody vegetation is established. The top 10-12 inches of the soil should be tilled and amended with two (2) inches of compost and stabilized with woodchip mulch. This work should occur during summer prior to plant installation, while silt fencing is still in place.

Additionally, all vegetation must be installed with wood chip mulch, as detailed below.

- All bare soils within the buffer enhancement area shall be covered with a minimum of three inches of mulch.
- The installer shall apply mulch in a three (3)-foot diameter ring around all installed plant material. Mulch shall be applied in a "donut" around each plant with a depth of six (6) inches at the center grading to a depth of three (3) inches at each edge.
- No mulch shall be placed within one (1) inch of the plant stems but shall cover the root balls to the maximum possible extent.
- Mulch shall consist of clean hog fuel, woodchips with greens, woodchips with no greens, or coarse shredded bark (no beauty bark and no stump grindings).
- Woodchip size shall average between 1/4 and 1/2 inches thick and one (1) to three
- (3) inches long (thin cut pulp chips are ideal).
- Mulch must be clean, free of materials detrimental to plant health, and free of invasive plant seeds and soil.

4.2.5 Plant Installation

Invasive Species Removal

All invasive plant material (Himalayan blackberry) must be removed prior to plant installation.

Installation Standards

- Installation must be done according to the agency-approved mitigation plan. Any changes must be approved by the project ecologist.

Plant Installation Timing

- Preferred timing for plant installation is during the dormant season (between October 15th and April 1st).
- Container plants are preferred for this project, however, **if bareroot plants are used, plant quantities should be increased by 20 percent to compensate for increased mortality.** Bare root material may only be used between December 1st and March 15th.
- If planting occurs outside of this window, additional care (watering) will be necessary to ensure plant survival.
- The contractor/applicant shall contact the project ecologist **prior** to installation to consult on placement.

Source of Plant Material

- Plant material shall be obtained from native plant nurseries growing stock from the Puget Sound lowlands. When possible, obtain plants from a local (Whatcom County or Skagit County) nursery. Provide the project biologist written documentation from the plant supplier verifying plant origination prior to plant installation.
- Any species substitutions must be approved by the project PWS.

Planting Guidelines

- A hole should be dug 1.5 times the size of the plant pot, to prevent the plant from becoming root bound. Actual planting shall follow the digging of holes as closely as possible to prevent the excavated soil from drying.
- Each plant shall be placed in a hole, and the hole shall be backfilled with native soil. Backfill shall be tamped down to remove voids in the soil. Excess soil shall be smoothed and firmed around plants, creating a slight depression to collect water.
- Do not install plants too deep or too shallow. Care should be taken to not bury the root crown of trees (the top-most root of root ball) as this can harm the long-term growth and life of the tree. The root crown should be placed at the ground level. Plants should also be installed deep enough in the soil that the root ball is not exposed.
- Avoid planting tangled-up roots or up-turned roots ("J" roots) as this may cause the plant to grow poorly or die.
- All plants shall be watered immediately after planting unless soils are heavily wet.

- Mulch shall be installed around all plants per the above specifications (Section 4.2.4).
- After installation, the contractor shall coordinate with NES to schedule a site inspection to verify all plants were installed according to design and are in good health.
- Actual size of plant material may vary depending on availability.

Plant Protection

- Blue tubes shall be placed around all installed shrubs.
- Caging around conifers is recommended to prevent herbivory from deer. Hog-wire cages (5-feet tall by 3-feet diameter) should be staked around each tree using three wood stakes or 0.5-inch thick bamboo (5 or 6 feet tall).

The buffer enhancement area is shown in Figure 4. Table 2 details the planting specifications for the enhancement area.

Table 2. Planting Specifications for the Buffer Enhancement Area (4,550 sq. ft.)

Scientific Name	Common Name	Grade (min. size)	Spacing	# Plants
Trees *Picea sitchensis*	Sitka spruce	18" minimum/ one gallon	15' OC	5
Pseudotsuga menziesii	Douglas fir			5
Pinus contorta	Shore pine			5
**Thuja plicata*	Western red cedar			5
Shrubs *Acer circinatum*	Vine maple		4' OC	10
Rosa nutkana	Nootka rose			40
Corylus cornuta	Beaked hazelnut			20
Physocarpus capitatus	Pacific ninebark			20
Symphoricarpos albus	Snowberry			40
Ribes sanguineum	Red-flowering currant			10
Holodiscus discolor	Oceanspray			10
Mahonia nervosa	Low Oregon grape			30
Ground cover *Polystichum munitum*	Sword fern		3' OC	30
Total				**230**

OC = On-center, B = bare-root, C = container
*Western red cedar is only to be planted in areas with existing shade

4.3 As-Built, Monitoring, and Maintenance

4.3.1 As-Built Documentation

After plant installation is complete, the contractor shall contact the project ecologist to conduct an as-built inspection. An as-built report shall be provided to jurisdictional agencies within 90 days after the planting phase of the project is complete. The as-built report shall be prepared by the project ecologist. It shall document where minor site design changes to the mitigation plan were necessary, the final planting schedule, and photographs.

The as-built report shall include documentation of completion of the following tasks, per this mitigation plan:

- Removal of invasive species
- Installation of all plants, mulch, blue tubes, and wire caging (including receipts)
- Installation of protective split-rail fencing and NGPA signage
- Recording of the conservation easement

4.3.2 Monitoring

Monitoring shall occur annually over a five-year period, following the completion of the as-built. Monitoring shall be performed by the project ecologist. The monitoring report shall evaluate the project's success based on the project performance standards contained in this report. Data collected during monitoring visits will be summarized in a technical memo and provided to the COB no later than October 1st of each monitoring year.

The following are the goals, objectives, and performance standards for the compensatory mitigation. The following performance standards shall be used to measure project success during the monitoring period.

Goal 1. Enhance stream buffer functions through installation of native vegetation.

Objective 1.1. Increase percent cover of native trees and shrub within the buffer areas.

Performance Standard 1.1.a Vegetation in the enhancement areas shall meet the survival or cover standards in Table 3. Survival in Year 1 is measured against the specified container quantity for all installed plants. Mean cover includes all native woody vegetation including installed and volunteer.

Table 3. Performance standards for native vegetation in the Enhancement Area

Rated Item	Year 1	Year 2	Year 3	Year 4	Year 5	Long Term
Survival (%) (compared to container plant quantity)	100	n/a				Natural Mortality
Mean cover (%) (Native species)	n/a	≥ 10	≥ 20	≥ 35	≥ 50	≥ 80

Standard 1.1.b Class A noxious weeds shall not be present within the enhancement areas. Class B and C noxious weeds shall cover no more than

10% of the woody plant community and no more than 15% of the herbaceous plant community within the enhancement areas. Weed classifications are based on the current Whatcom County Noxious Weed List.

Objective 1.2. Increase native species diversity within the on-site stream buffer.

Performance Standard 1.2.a At least two (2) of the specified conifer species and five (5) of the specified shrub species shall be established within the enhancement areas by the end of the monitoring period.

Goal 2. Permanently protect stream buffer functions and fish habitat.

Objective 2.1. Implement long-term protection measures to protect the retained and enhanced on-site stream buffer areas from future encroachment and disturbance.

Performance Standard 2.1.a Cedar, wildlife-permeable split-rail fence (or approved alternative) shall be installed along the outer boundary of the retained and enhanced stream buffer, in the location shown in Figure 4.

Performance Standard 2.1.b One (1) NGPA sign shall be installed on the fencing, in the location shown in Figure 4.

Performance Standard 2.1.c Blue tubes and wire caging shall be removed from all plant material in the summer of Year 3 of monitoring, or as recommended by biologist, to prevent the protective material from becoming trash and litter within the stream, as well as to avoid adverse long-term impacts to plant health.

Objective 2.2. Implement long-term protection measures to permanently protect the retained and enhanced on-site stream buffer areas from future development.

Performance Standard 2.2.a The retained on-site stream buffer shall be placed in a permanent conservation easement recorded at the Whatcom County auditor's office prior to occupancy building permits.

4.3.3 Maintenance

The applicant shall provide the maintenance activities detailed in this report and subsequent annual monitoring memos throughout the monitoring period. Maintenance shall be performed each year after the as-built report is approved. Table 4 details the general maintenance tasks.

Table 4. Maintenance Tasks

Task	Description	Schedule
Invasive species removal	Remove invasive plant material (primarily Himalayan blackberry)	As needed to meet performance standards
Weed suppression	Remove herbaceous weeds around installed plants as needed during the growing season (May to Sept.). Do not remove volunteer native shrub or tree sprouts.	3 times per growing season in Years 1 to 5
Replace dead plants	Request plant substitutions if necessary	Replace **all** dead plants in Year 1 Replace as needed in remaining years to meet performance standards
Irrigation	New plant material shall be irrigated once per week whenever less than one inch of rainfall occurs over any two-week period from June 1 through August 15; once every other week from August 6 through September 30	Year 1

4.3.4 Long-Term Site Management

Once successfully installed, the mitigation area should be self-sustaining. No long-term maintenance of the mitigation area is anticipated at this time. Any necessary long-term management and maintenance recommendations shall be made in the final monitoring report.

4.3.5 Contingency Plans

If there is a significant problem with the mitigation achieving its performance standards, the project proponent shall work with NES or another qualified ecologist to develop a Contingency Plan. Contingency Plans can include, but are not limited to additional plant installation, erosion control, modifications to hydrology (excavation work), and plant substitutions of type, size, quantity, and location. Such Contingency Plan shall be submitted to applicable regulatory agencies by December 31st of any year when deficiencies are discovered.

4.4 Surety

As required by the COB, a bond will be posted for 150% of the estimated construction costs of the mitigation plan. **Note**: the bond amount is an ***estimate only*** and is not intended to representan actual bid.

The following items are included in the bond amount for this project:

• Plants (230 plants x $5/plant)		$ 2,100.00
• Mulch- installed: (230 plants x $4/plant)		$ 920.00
• NGPA Sign ($50 x 1 sign)		$ 50.00
• Split-rail fencing (147 feet x $12/foot)		$ 1,764.00
• Biological Supervision during installation (4 hours)		$ 580.00
• As-built Report		$ 725.00
• Monitoring ($870/year for 5 years)		$ 4,350.00
• Maintenance ($250/year for 5 years)		$ 1,250.00
.	subtotal	$ 11,739.00
.	x (50%)	$ 5,869.50
	Total Bond:	**$ 17,608.50**

APPENDIX A: REFERENCES

References

Anderson, P., S. Meyer, P. Olson, and E. Stockdale. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. Washington State Department of Ecology, Shorelands and Environmental Assistance Program. Ecology Publication #16-06-029. Olympia, WA.

City of Bellingham Planning and Community Development. 2018. City of Bellingham Critical Areas Ordinance: Bellingham Municipal Code Chapter 16.55. Bellingham, WA

CityIQ Interactive Mapper. 2024. Available online at [http://www.iqmap.org/cityiq/website/index.html]. Accessed August 2024.

Element Solutions. 2024. Geotechnical Evaluation & Stormwater Feasibility Assessment: Proposed Residential Redevelopment (#2024058). Bellingham, WA.

Google Maps. 2024. Available online at [https://www.google.com/maps/] Accessed August 2024.

Hruby, T. 2013. Update on Wetland Buffers: The State of the Science, Final Report, October 2013. Washington State Department of Ecology Publication #13-06-11.

NW Ecological Services. 2024. *Critical Areas Assessment.* Prepared for Parcel #380320540078 – 2302 Alabama Street, Bellingham, WA. January 2024. [Cited in text as NES, 2024].

Sound Native Plants. Plant Quantity Calculator. Available online at [https://soundnativeplants.com/nursery/plant-quantity-calculator/]. Accessed August 2024.

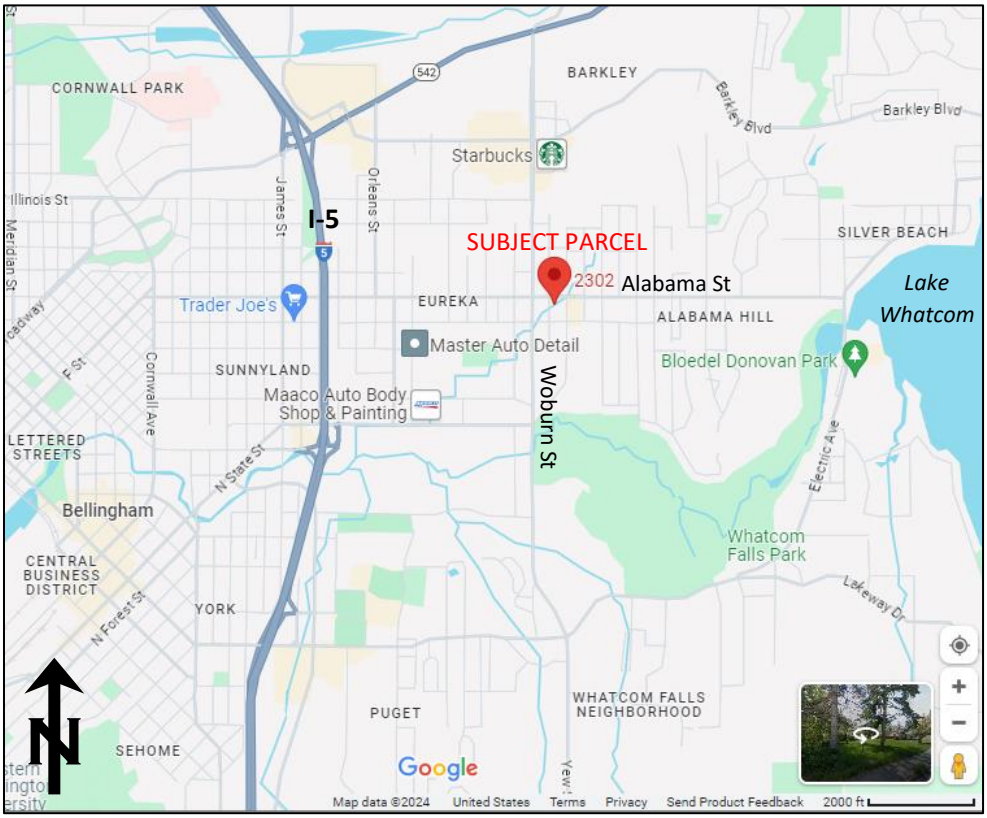
Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. March 2006. Wetland Mitigation in Washington State - Part 2: Developing Mitigation Plans. Washington State Department of Ecology Publication #06-06-011b. Olympia, WA.

Washington State Department of Ecology. 2008. Using the Wetland Rating System in Compensatory Mitigation. Washington State Department of Ecology Publication #08-06-009. Olympia, WA.

Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. (2021). Wetland Mitigation in Washington State–Part 1: Agency Policies and Guidance (Version 2). Washington State Department of Ecology Publication #21-06-003.

Washington State Department of Ecology. 2024. Water Quality Atlas. Online at [https://apps.ecology.wa.gov/waterqualityatlas/wqa/map]. Accessed August 2024.

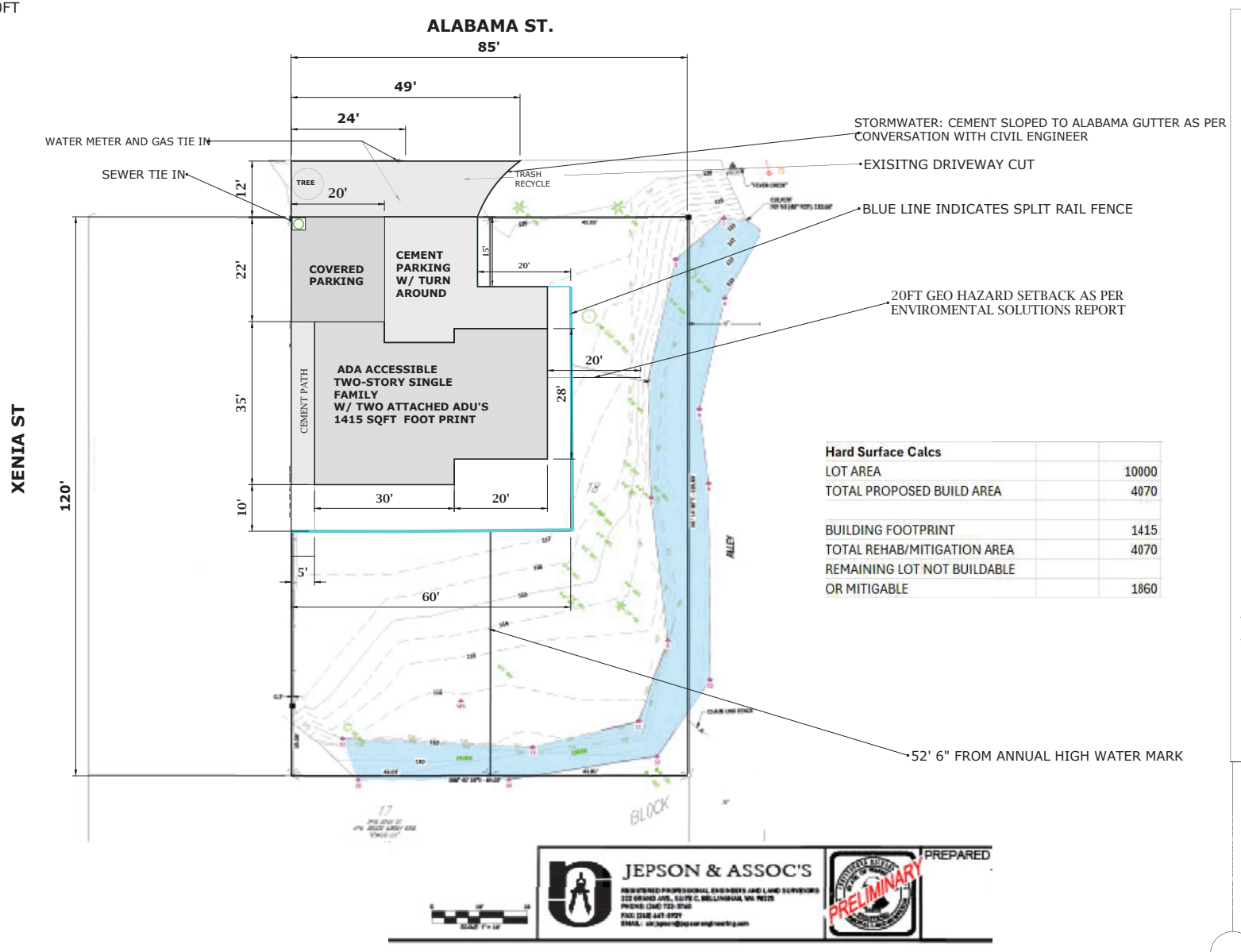
APPENDIX B: FIGURES



ECOLOGICAL NORTHWEST	**Vicinity Maps (Google Maps)** **2302 Alabama Street (Parcel #380320540078) Impact Assessment & Mitigation Plan**	**Figure 1** **AUG 2024**

SITE PLAN

SCALE 1FT = 10FT

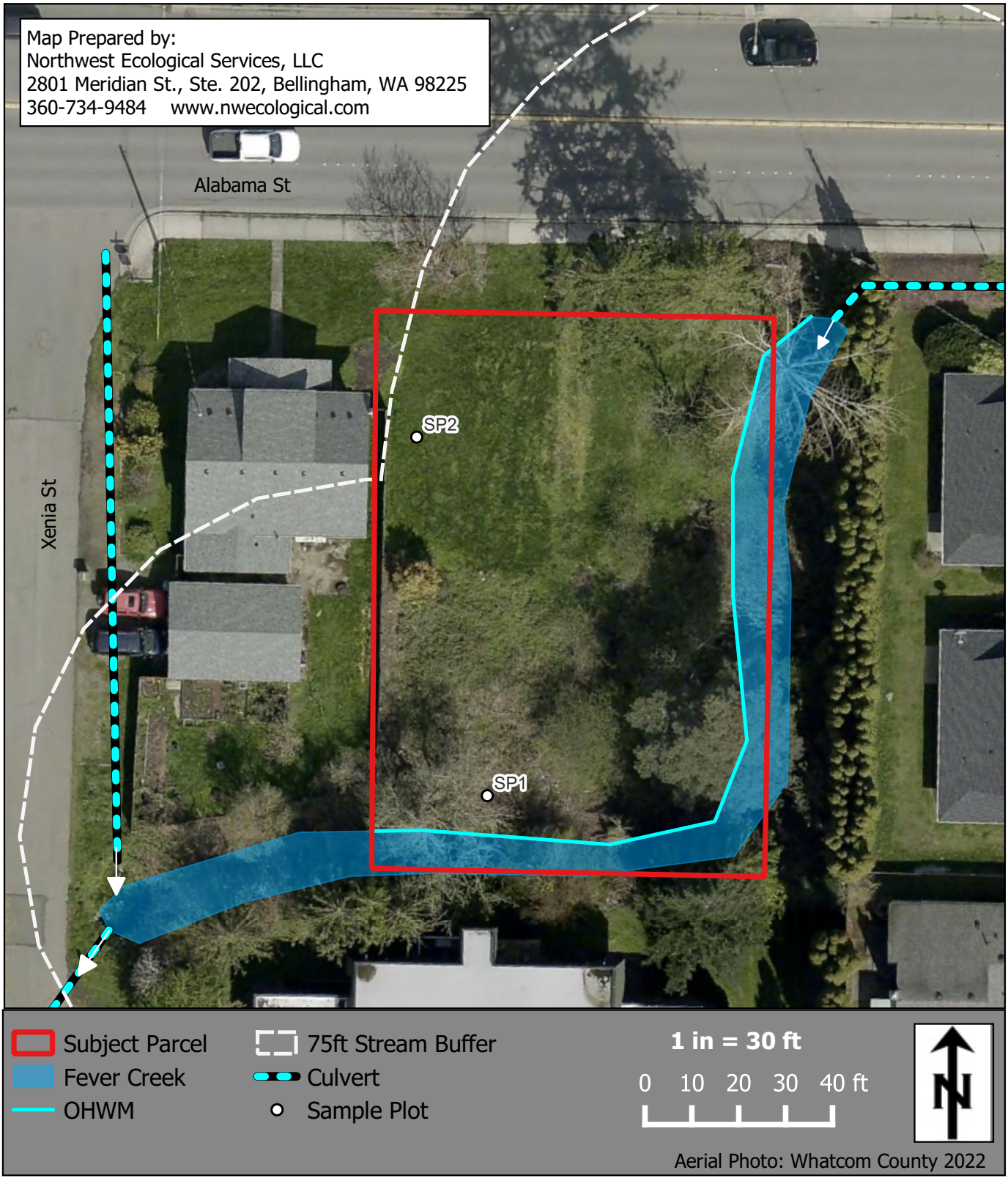


Hard Surface Calcs		
LOT AREA		10000
TOTAL PROPOSED BUILD AREA		4070
BUILDING FOOTPRINT		1415
TOTAL REHAB/MITIGATION AREA		4070
REMAINING LOT NOT BUILDABLE OR MITIGABLE		1860

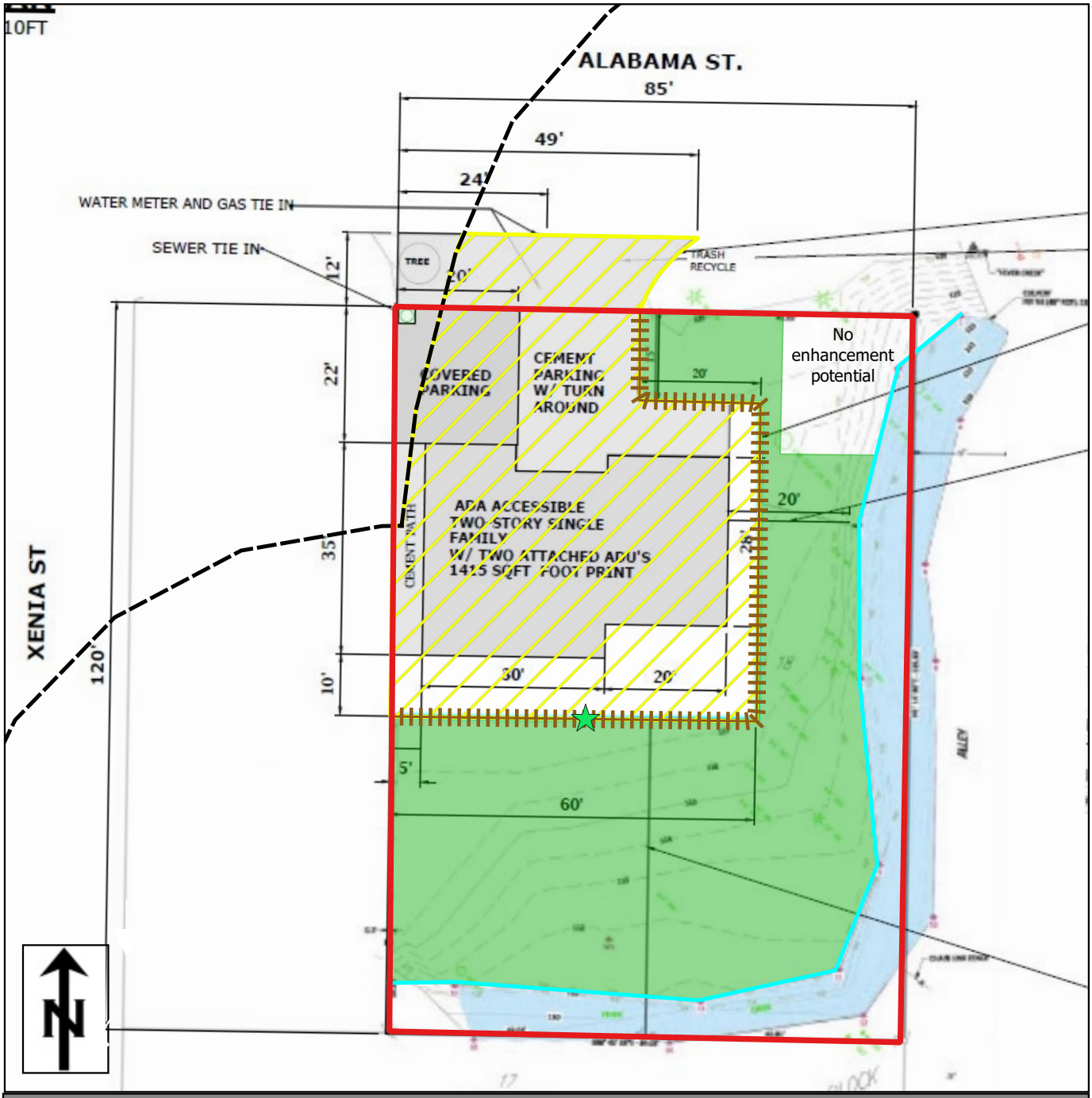
2302 Alabama St.
Bellingham, WA 98226

360 DESIGN & BUILD

Figure 2. Site Plan



Ecological Northwest	**Critical Areas Map** **2302 Alabama St** **Impact Assessment & Mitigation Plan**	**Figure 3** **AUG 2024**



ECOLOGICAL NORTHWEST	**Stream Buffer Impact/Enhancement Map** **2302 Alabama St** **(Parcel #380320540078)** **Conceptual Mitigation Memo**	**Figure 4** **AUG 2024**

APPENDIX C: HOUSING ANALYSIS SPREADSHEET

Surrounding 300 ft

SFR	Parcel #	SF				Multifamily	Parcel #	Type	SF	
	380320512078	1,217					380320509066	4PLEX 2 Story	2,772	
	380320525077	1,322					380320522045	Duplex-1 story	1,980	
	380320521068	1,488					380320538064	3PLEX 2 Story	3,126	
	380320522058	1,842					380320540058	3PLEX 2 Story	2,988	
	380320522052	1,568					380320541051	DUPLEX-2 STORY	2,436	
	380320537080	1,268					380320541045	DUPLEX-2 STORY	2,436	
	380320524096	2,374					380320551078	DUPLEX-1 STORY	1,680	
	380320538094	1,198						DUPLEX-1 STORY	1,680	
	380320542104	760					380320551068	DUPLEX-1 STORY	1,888	
	380320541111	1,106					380320555060	DUPLEX-2 STORY	1,848	
	380320543114	1,134					380320551056	DUPLEX-1 STORY	1,888	
	380320552094	899					380320554047	CMCL- MUTI-UNIT RESIDENT	3,976	
	380320557094	1,716					380320518100	4PLEX 2 Story	4,480	
	380320553099	1,408					380320538099	DUPLEX-2 STORY	3,040	
	380320553104	1,682								
	380321006097	1,828								
	380320508093	1,248								
	Average	1415.18							2,587	

Total residences 31.00