MONROE WASHINGTON	**HEARING EXAMINER EXHIBIT LIST**
PROJECT:	Public Hearing for Preliminary Plat and Planned Residential Development for Garibaldi
FILE NUMBER(S):	PLPRD2018-02
APPLICANT:	Mark Donner for Garibaldi Lake, LLC
HEARING DATE AND LOCATION:	**December 30, 2021 at 10:00 AM** Via Zoom Please click the link below to join the webinar: https://us02web.zoom.us/j/86772473016

EXHIBITS

1. Staff Analysis
2. Vicinity Map
3. Preliminary Plat Map
4. 4-A Preliminary Plat Application
   4-B Project Narrative
5. Letter of Complete Application
6. 6-A Amended Preliminary Plat Application
   6-B Amended Project Narrative
   6-C PRD Consistency
7. First Notice of Application
   - 7- A Affidavit of Publication
   - 7- B Affidavit of Posting (On Site)
   - 7- C Affidavit of Mailing
   - 7- D Agency Emails
8. Second Notice of Application
   - 8- A Affidavit of Publication
   - 8- B Affidavit of Posting (On Site)
   - 8- C Affidavit of Posting (CH)
   - 8- D Affidavit of Mailing
9. 9-A Public Comments
   9-B Applicant's Response

10. SEPA – Determination of Non-Significance (DNS)
    - 10- A NODNS Publication correspondence
    - 10- B Affidavit of Email to Public Agencies (DNS)
    - 10- C Affidavit of Mailing to interested parties (DNS)
    - 10- D Affidavit of Posting (CH)
11. Notice of Public Hearing
    - 11- A Affidavit of Publication
    - 11- B Affidavit of Mailing
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    - 11- D Affidavit of Posting (On Site)
12. Preliminary Landscape Plan
13. Conceptual Road, Drainage, and Utility Plan
14. Deviation Requests
15. 15-A Geotechnical Report
    15-B Geotechnical Memorandum
16. Storm Drainage Report
17. Traffic Report
18. Wetland Report

EXHIBIT 1

	STAFF REPORT AND RECOMMENDATION **GARIBALDI** Public Hearing for the Garibaldi Preliminary Plat and Planned Residential Development (PRD)
HEARING EXAMINER:	Mr. Phil Olbrechts, City of Monroe Hearing Examiner
FILE NUMBERS:	PLPRD2018-02
DESCRIPTION:	Public Hearing for the Garibaldi Preliminary Plat and Planned Residential Development (PRD) to subdivide approximately 17.85 acres into 90 lots in the Residential 4 Dwellings Per Acre (R4) zoning district.
APPLICANT:	Garibaldi Lake, LLC 1010 Market Street Kirkland, WA 98033
PROJECT LOCATION:	The site is located at 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, Washington, 98272. Snohomish County Tax Parcel Numbers: 28073100200800, 28073100201600, 28073100203900, 28073100202800, 28073100202900. The properties are generally located within portions of the northeast and southeast quarters of the northwest quarter of Section 31, Township 28N, Range 7 East, Willamette Meridian in Snohomish County, Washington.
HEARING DATE:	December 30, 2021 at 10:00 AM
HEARING LOCATION:	Zoom Virtual Meeting Zoom Join Link: https://us02web.zoom.us/j/86772473016
STAFF CONTACT:	Anita Marrero, Senior Planner

A. PROJECT DESCRIPTION

The applicant, Garibaldi Lake, LLC, has submitted an application for preliminary plat and planned residential development (PRD) approval of a 90-lot subdivision/PRD on approximately 17.85 acres (approximately 777,546 square feet). The subject project is zoned Residential 4 Dwellings Per Acre (R4). The project site is addressed as 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, WA 98272; and is identified by Snohomish County Tax Parcel Numbers 28073100200800, 28073100201600, 28073100203900, 28073100202800, 28073100202900. The subject site contains single-family residences and accessory buildings. Conceptual street improvements, clearing and grading, and installation of all utilities (sewer, water, storm, power, gas, telephone, cable and telecommunications, etc.) have been reviewed for compliance with the development standards in the applicable sections of the Monroe Municipal Code, as well as other pertinent documents adopted by reference in the code. Frontage improvements, including pavement, curb, gutter, planters, and sidewalks, will be required along internal access roads and Chain Lake Road.

B. GENERAL INFORMATION

1. Applicant and Owner:
   Garibaldi Lake, LLC
   1010 Market Street
   Kirkland, WA 98033

2. Contact Person:
   Matt Hough, PE

CPH Consultants
11321-B NE 120th Street
Kirkland, WA 98034

3. General Location:
The parcels comprising the project site are identified by Snohomish County tax parcel identification numbers 28073100200800, 28073100201600, 28073100203900, 28073100202800, and 28073100202900. The parcels are generally located within portions of the northeast and southeast quarters of the northwest quarter of Section 31, Township 28N, Range 7 East, Willamette Meridian in Snohomish County, Washington. (Exhibit 2).

4. Site Addresses:
13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, WA 98272

5. Description of Proposal:
The applicant, Garibaldi Lake, LLC, has submitted an application for a preliminary plat and a preliminary planned residential development (PRD) to subdivide a five parcel, 17.85-acre site into 90 single-family residential building lots. The project site is located west of Chain Lake Road. The site has a fairly regular and moderately steep grade from higher elevations in the northwest corner sloping downward toward the south and east boundaries. There is a steeper portion in the very southeast corner of the site that slopes southeast. The site currently contains the following structures:

TAX PARCEL #	EXISTING STRUCTURE(S)	TO BE DEMOLISHED?
28073100200800	Single-Family Residence	*Yes*
	Accessory Buildings	*Yes*
28073100201600	Single-Family Residence	*Yes*
28073100203900	Single-Family Residence	*Yes*
	Detached Garage	*Yes*
28073100202800	Single-Family Residence/Detached Garage	*Yes*
28073100202900	Single-Family Residence/Detached Garage	*Yes*

Frontage improvements, including pavement, curb, gutter, planters, and sidewalks, will be required along internal access roads and Chain Lake Road adjacent to the project site.

6. Critical Areas:
An unclassified stream is located within a Category III wetland located in the southeastern corner of the site. This stream, wetland, and associated critical area buffers are protected in a separate common open space tract. The stream flows to a culvert inlet approximately 50 feet downstream and continues downstream through a series of wetland areas and culverts that discharges into Woods Creek and then the Skykomish River within the Snohomish River Watershed, WRIA 7.

7. Comprehensive Plan Land Use Designations, Zoning Designations, and Existing Land Uses of the Project Site and Surrounding Area:

AREA	LAND USE DESIGNATION	ZONING	EXISTING USE
Project Site	Low Density Single Family Residential (SFR)	Residential 4 Dwelling Units Per Acre (R4)	Single-family residences and associated accessory buildings
North of Site	Low Density Single Family Residential (SFR)	Residential 4 Dwelling Units Per Acre (R4)	Single-family residences
South of Site	Low Density Single Family Residential (SFR)	Residential 4 Dwelling Units Per Acre (R4)	Single-family residences
East of Site	Low Density Single Family Residential (SFR)	Residential 4 Dwelling Units Per Acre (R4)	Single-family residences
West of Site	Low Density Single Family Residential (SFR)	Residential 4 Dwelling Units Per Acre (R4)	Single-family residences

8. Public Utilities and Services Provided by:

Water:	City of Monroe	Gas:	Puget Sound Energy
Sewer:	City of Monroe	Cable TV:	Comcast
Garbage:	Republic Services	Police:	City of Monroe
Storm Water:	City of Monroe	Fire:	Snohomish Regional Fire & Rescue
Telephone:	Verizon	School:	Monroe Public Schools
Electricity:	Snohomish County PUD No. 1	Hospital:	Evergreen Health

C. APPLICATION REVIEW PROCESS

1. Regulatory Requirements for Review of Quasi-Judicial Actions:
   A Preliminary Plat/Planned Residential Development (PRD) is a public hearing review process per City of Monroe Municipal Code (MMC) Section 21.20.050(F). It requires a public hearing before the Hearing Examiner and a recommendation to the City Council.

2. Application Submittal and Completeness:
   The Garibaldi preliminary subdivision/PRD application was received by the City of Monroe on December 19, 2018 (Exhibit 4). The application was deemed complete and vested on January 7, 2019 (Exhibit 6). An amended Combined Permit Application was received by the City of Monroe on March 10, 2021.

3. Public Notification and Comments:
   Public notice for the application was provided in accordance with the requirements of MMC section 22.84.050(A). A Notice of Application was published, mailed, and posted on January 16, 2019 (Exhibit 7). A public comment period was provided from January 16, 2019 through 5:00 PM on January 31, 2019. Two public comments were received. One in the form of a petition signed by eleven (11) homeowners adjacent to the project site (Exhibit 9). One agency comment from PUD was received (Exhibit 9). An amended preliminary plat application (Exhibit 6A) was submitted on March 10, 2021. A second Notice of Application was published, mailed, and posted on April 7, 2021 (Exhibit 8). A public comment period was provided from April 7, 2021 through 5:00 PM on April 21, 2021. Three public comments were received with one of the comments being an updated petition signed by the same eleven (11) homeowners (Exhibit 9).

   A Notice of Public Hearing was published, mailed, and posted on December 17, 2021 (Exhibit 11). The date of the open record public hearing with the Hearing Examiner is set for December 30th at 10:00 AM.

4. Environmental Review:
   A Determination of Non-Significance (DNS) was issued, published, posted, and mailed on December 6, 2021 (Exhibit 8 - 8E). The DNS provided a comment and

appeal period ending at 5:00 PM on December 20, 2021. No appeals regarding the SEPA threshold determination were received by the City during the specified appeal period.

D. FINDINGS OF FACT

1. Application Submittal and Completeness:
   The application was originally received by the City of Monroe on December 19, 2018 (Exhibit 4). The application was deemed complete and vested on January 7, 2019 (Exhibit 5). An amended Combined Permit Application was received by the City of Monroe on March 10, 2021 (Exhibit 6).

2. Public Comments:
   Due to the nature and number of comments received by the neighbors, staff suggested the developer conduct a community meeting to discuss the homeowners concerns. The developer stated they would contact the homeowners directly rather than initiate a community meeting. (Exhibit 9)

3. Environmental Review:
   A SEPA Determination of Non-Significance (DNS) was issued on December 6, 2021 (Exhibit 10). One agency comment was received. No appeals on the SEPA threshold determination were filed.

4. Bulk Requirements and Dimensional Standards:
   Per MMC section 18.10.050, Zoning Land Use Matrix, and MMC section 18.10.140, Bulk Requirements and Table A, the development shall comply with the following standards for the Residential 4 Dwellings per Acre (R4) zone for single family residential development:

Excerpt of MMC 18.10.140 – Table A
Residential Zoning District Bulk Development Requirements for PRDs in R4 Zoning

Bulk Requirement	Standard for PRDs
Maximum density	4 dwelling units per acre
Minimum lot width	30 feet
Minimum front yard setback	10 feet to the living area/20 feet from the garage
Minimum side yard setback	5 feet
Minimum rear yard setback	10 feet
Maximum building height	35 feet
Maximum lot coverage	60 percent
Landscape buffer	10 feet*

** A landscape buffer is required along the outside of the development where it abuts a standard subdivision or different zoning district [MMC 18.10.140(Table A - Note 15)].*

5. Residential Density Calculations and Allowance:
   Sections 18.10.010(B), 18.84.080(K), 18.84.140, and 18.84.160(A) of the MMC delineate how an applicant can determine the maximum allowed residential density for a PRD.

   To calculate the maximum allowed base density for a site in the R4 zone, multiply the gross site area, in acres, by four. The base density for the Garibaldi site, with a gross site area of 17.85 acres, would be calculated as follows.

   Step 1. Gross site area (in acres) * 4 (4 dwelling units per acre in the R4 zone):

   *17.85 acres * 4 = 71.4 base dwelling units (base density)*

Regulations governing the application of a density bonus to a PRD can be found in MMC 18.84.080(K)(2-4), MMC 18.84.150, and MMC 18.84.160(C). With the inclusion in a PRD of the required amount of open space specified in MMC 18.84.080(A)(1)(Table 1), a thirty percent density bonus will be granted in the R4 zone. Determining the density bonus in the R4 zone entails multiplying the base density calculated above by 0.30 to determine the total number of bonus units allowed for the PRD. The density bonus for the subject site would be assessed as follows.

Step 2. Base density * 0.30 (30 percent density bonus allowance for the R4 zone):

*71.4 dwelling units (base density) * 0.30 = 21.42 units (density bonus)*

Step 3. Density bonus + Base density = Maximum units for the PRD:

21.42 bonus units + 71.4 base units = 92.82 units

Step 4. MMC 18.10.010(B)(1) requires that "when calculating the maximum residential density, any resulting fraction 0.50 or over shall be rounded up to the next whole number and any fraction 0.49 or under shall be rounded down to the preceding whole number:"

*A maximum of **93 units** are allowed in the Garibaldi preliminary plat/PRD.*

The applicant is proposing 90 dwelling units, which is below the maximum density allowed in the R4 zoning district. Thus, the density is consistent with that allowed by the zoning code.

6. MMC Title 17 Subdivision(s):
   Pursuant to MMC 17.12.030(E), the City Planner, City Engineer, Fire Marshal, and Building Official have all reviewed and commented on the proposed project. Their comments are included in the body of this report and in the project permit conditions of approval.

7. MMC Title 17 Preliminary Plat Decision Criteria:
   Pursuant to MMC 17.12.030(H)(1-3) the applicant shall comply with the following:

   The hearing authority shall consider if the proposed subdivision conforms to the comprehensive plan and the Shoreline Master Program;

   The City of Monroe's 2015-2035 Comprehensive Plan Future Land Use Map designates the project site as "Low Density SFR." The Property's existing zoning designation for the preliminary plat/PRD is Single-Family Residential – 4 Units Per Acre (R4). The proposed preliminary plat and PRD, under R4 zoning, which provides for 4 dwelling units per acre, conforms to the City of Monroe's 2015-2035 Comprehensive Plan "Low Density SFR" designation for density. The City of Monroe 2015-2035 Comprehensive Plan Table 3.07 provides the following description of the "Low Density SFR" land use plan designation:

   Low Density SFR
   The Low Density Single-Family Residential designation will develop at an approximate gross density of three to five units per acre. This is a gross density, applying this density to every acre within the designation regardless of physical constraint. By using a gross density – and not one tied specifically to a particular lot size – developers can explore clustering or

other creative design approaches when their sites include constraints imposed by critical areas, easements or rights of way. In cases where land is relatively free of constraint, single-family subdivisions in this designation may have individual lots ranging from about 9,000 square feet to 14,500 square feet. In highly constrained areas individual lots may be smaller. The Low Density SFR designation allows for parks. The Low Density SFR designation allows for neighborhood scale retail and commercial developments along arterials.

The site is not located within the shoreline jurisdiction for the City. Therefore, this provision does not apply.

The hearing authority shall consider the physical characteristics of a proposed subdivision site and may recommend disapproval of a proposed plat because of improper protection from floods, inundation or wetland conditions;

The site is not located within a floodplain. As described above, there is an unclassified stream located within a Category III wetland on site. The stream, wetland, and associated critical area buffers are protected in a separate common open space tract.

All identified direct impacts must be mitigated or meet concurrency as set forth in MMC Title 20.

All direct impacts of the proposal have been or will be mitigated through municipal code requirements and the conditions of preliminary plat approval.

Per MMC section 20.06.030(D), strategies and financial commitments shall be in place to complete necessary improvements or strategies within six years of time of development as set forth in the Comprehensive Plan. This includes the payment of mitigation and/or impact fees for water, wastewater, parks, transportation, and schools. Stormwater is mitigated on site by the applicant during subdivision improvement construction. The City of Monroe Police Department and Snohomish Regional Fire & Rescue did not raise any concerns regarding level of service standards when provided the opportunity to comment on the proposed preliminary plat.

According to the information presented in the development application as well as the analysis completed by City staff, the development does not lower the level of service on the following public facilities and services below the minimum standards established within the City of Monroe Comprehensive Plan:

a. Potable water;
b. Wastewater;
c. Storm water drainage;
d. Police and fire protection;
e. Parks and recreation;
f. Arterial roadways; and
g. Public schools.

8. RCW 58.17.110 - Approval or disapproval of subdivision and dedication-factors to be considered-Conditions of approval-Finding-Release from damages:
   1) The city, town, or county legislative body shall inquire into the public use and interest proposed to be served by the establishment of the subdivision and dedication. It shall determine:

(a) If appropriate provisions are made for, but not limited to, the public health, safety, and general welfare, for open spaces, drainage ways, streets or roads, alleys, other public ways, transit stops, potable water supplies, sanitary wastes, parks and recreation, playgrounds, schools and school grounds, and shall consider all other relevant facts, including sidewalks and other planning features that assure safe walking conditions for students who only walk to and from school; and

The preliminary plat map (Exhibit 3) confirms that the preliminary plat application includes provisions for the public health, safety, and general welfare including open spaces, drainage ways, streets or roads, potable water, sanitary wastes, parks and recreation, playgrounds, schools and school grounds, and sidewalks that assure safe walking conditions for students who only walk to and from school. The Monroe School District was notified of the development application. No comments were from the Monroe School District on the proposal.

(b) Whether the public interest will be served by the subdivision and dedication.

The public interest would be served by the subdivision and dedication, provided that the subdivision and dedication were developed under the current zoning district (R4). Under this scenario, an existing parcel in the City would be developed allowing for efficient provision of public services, consistent with densities identified in the Monroe 2015-2035 Comprehensive Plan.

(2) A proposed subdivision and dedication shall not be approved unless the city, town, or county legislative body makes written findings that:

(a) Appropriate provisions are made for the public health, safety, and general welfare and for such open spaces, drainage ways, streets or roads, alleys, other public ways, transit stops, potable water supplies, sanitary wastes, parks and recreation, playgrounds, schools and school grounds and all other relevant facts, including sidewalks and other planning features that assure safe walking conditions for students who only walk to and from school; and

The preliminary plat map (Exhibit 3) confirms that the preliminary plat application includes provisions for the public health. The Staff Analysis addresses the provisions made for safety and general welfare, including open spaces, drainage ways, streets or roads, potable water supplies, sanitary wastes, parks and recreation, playgrounds, schools and school grounds, and sidewalks that assure safe walking conditions for students who only walk to and from school.

(2) A proposed subdivision and dedication shall not be approved unless the city, town, or county legislative body makes written findings that:

(b) Appropriate provisions are made for the public health, safety, and general welfare and for such open spaces, drainage ways, streets or roads, alleys, other public ways, transit stops, potable water supplies, sanitary wastes, parks and recreation, playgrounds, schools and school

grounds and all other relevant facts, including sidewalks and other planning features that assure safe walking conditions for students who only walk to and from school; and

The proposal being reviewed by the Hearing Examiner does not adversely change the preliminary plat's/PRD provisions for the public health. The conditions of the approved preliminary plat address safety, and general welfare, including open spaces, drainage ways, streets or roads, potable water supplies, sanitary wastes, parks and recreation, playgrounds, schools and school grounds, and sidewalks that assure safe walking conditions for students who walk to and from school.

(c) The public use and interest will be served by the platting of such subdivision and dedication. If it finds that the proposed subdivision and dedication make such appropriate provisions and that the public use and interest will be served, then the legislative body shall approve the proposed subdivision and dedication. Dedication of land to any public body, provision of public improvements to serve the subdivision, and/or impact fees imposed under RCW 82.02.050 through 82.02.090 may be required as a condition of subdivision approval. Dedications shall be clearly shown on the final plat. No dedication, provision of public improvements, or impact fees imposed under RCW 82.02.050 through 82.02.090 shall be allowed that constitutes an unconstitutional taking of private property. The legislative body shall not as a condition to the approval of any subdivision require a release from damages to be procured from other property owners.

Areas designated for dedication to the City of Monroe are clearly shown on the face of the plat and are noted in the conditions of preliminary plat approval. Furthermore, said dedications shall be included on the face of the final plat. The subject proposal does not include dedication of a public park. Private recreation space has been provided in Tracts 990, 993, 995, and 996. Required site improvements and impact fees will be required as conditions of plat approval. The Washington State Growth Management Act requires that jurisdictions that plan shall have sufficient housing capacity to meet projected growth targets. The proposed plat/PRD increases the residential density of the City by creating lots to accommodate future population growth, which increases the City's housing capacity.

9. <u>MMC Title 18 Planned Residential Development Decision Criteria</u>:
The applicant has applied for a preliminary PRD as part of the preliminary plat application. PRDs are intended to promote creativity in site layout and design, allowing flexibility in the application of the standards for residential development to protect and enhance environmental features, and provide other public benefits. As part of the proposed preliminary plat/PRD the applicant is proposing landscaping and additional open space and park improvements.

Per MMC section 18.84.080, the applicant must meet the general requirements for a PRD. These criteria, followed by a staff response, are provided below:

a) The inclusion of housing site standards as described in subsection (G) of this section.

The applicant shall provide housing elevations/facades review in accordance with

the above subsection at the time of building permit application.

b) The inclusion of street and site design standards as described in subsection (H) of this section.

The applicant is providing a series of four internal public streets and four private access tracts. Tract 988 also serves as the secondary access to Chain Lake Road for emergency vehicle access. The proposed public streets will be fully paved with sidewalks, planter strips, and curb and gutter. The private access tracts will have 20 feet of pavement and 5-foot sidewalks along lot frontages. The applicant will also be improving the adjacent 45 feet of Chain Lake Road, which will have a total ROW width varying from 75 feet to 90 feet. The improvements for the applicant's 45-foot portion of the 90-foot-wide road section are proposed generally in the order specified in the following table, from ROW line to center of Chain Lake Road:

Proposed Improvement	Width
1. Landscape area	Varies from 2 to 15 feet
2. Ped./Bike Trail	10 feet
3. Planter strip	Varies from 2' to 15.5'
4. Shoulder + curb	6.5 feet
5. Travel lane 1	11 feet
Total width	***45 feet****

All internal public streets have a right-of-way width of 52 feet. The improvements for the 52-foot-wide street section varies depending on the inclusion of no on-street parking, parking on one side of the street, or parking on both sides of the street. In the first case the roadway elements are as follows:

Proposed Improvement	Width
1. Sidewalk	5 feet
2. Planter strip + curb	7 feet
3. Travel lane 1	14 feet
4. Travel lane 2	14 feet
5. Planter strip + curb	7 feet
6. Sidewalk	5 feet
Total width	***52 feet****

The public street section with parallel parking on both sides of the street looks like the following:

Proposed Improvement	Width
1. Sidewalk	5 feet
2. Parallel Parking + curb	8.5 feet
3. Travel lane 1	12.5 feet
4. Travel lane 2	12.5 feet
5. Parallel Parking + curb	8.5 feet
6. Sidewalk	5 feet
Total width	***52 feet****

The applicant has submitted and obtained approval of two Deviation Requests from the City of Monroe Public Works Design and Construction Standards. The first Deviation Request will reduce the width of the ROW for public streets from 60 feet 52 feet. The curb-to-curb pavement width will vary from 28-feet to 41-feet depending on the provision of one, two or no parking lanes as shown in the tables above. The standard curb-to-curb street width is 36-feet in a 60-foot-wide ROW that includes parking on both sides of the street. In all cases the travel lanes for the modified street sections are at least as wide as the standard street section and sidewalk provisions for pedestrians have not changed. The planting strips have been eliminated on the sides of the streets where on-street parking is provided.

The second deviation involves the diameter of the cul-de-sac at the end of Road D. The curb-to-curb diameter has been reduced from 90-feet to 80-feet. To compensate for the reduced diameter the sidewalks are designed to carry fire trucks and a mountable curb, as used in roundabouts, separates the asphalt pavement from the sidewalk. Typically a 6-inch vertical curb would be used. The net result is an equivalent turning area for fire equipment. This revised design was coordinated with the local fire district.

c) The inclusion of park recreational usable open space and landscaping as described in subsection (I) of this section.

Pursuant to MMC 18.84.080(A)(1), a PRD located within the R4 zone must dedicate a minimum area of 900 square feet of usable park and recreational open space per base dwelling unit. The applicant is requesting to subdivide the subject site into 90 single-family residential lots, Based on the 71.4 allowed base units, a minimum useable open space dedication of 64,260 square feet is required (1.48 acres). Tracts 990, 993, and 995 are considered the Central Park and contains a soft surface trail, benches, and picnic table. Tract 996 contains a play structure. Within Tract 990 the applicant is providing a total open space gross area of 25,562 square feet (.58 acres). Tract 993 includes 31,332 square feet (.72 acres) of open space and Tract 995 includes 9,572 square feet (.22 acres) for a cumulative total of 66,467 square feet. Therefore, the proposal exceeds the minimum required dedication of 900 square feet per base unit. Pursuant to MMC 18.84.080(I)(2), “All park and recreational usable open space shall be three-fourths acre or larger.” Tracts 990, 993, and 995 provides a useable open space with an area greater than three-fourths of an acre.

As discussed above, the proposed subdivision provides four private neighborhood parks/tracts within the development. Tracts 990, 993, and 995 (66,461 sq. ft.) will provide active and passive recreation and will contain a soft surface trail, picnic tables, and benches. Tract 996 will have a play structure (Exhibit 12). Maintenance of the park, recreation, open space areas and critical areas Tract 999 shall be the responsibility of the homeowner’s association.

d) The inclusion of landscape design standards as described in subsection (J) of this section.

The project proposes additional landscaping within Tracts 997, 998, and 989. The project also includes street trees located within five-foot landscape strips along the new interior public streets and adjacent to Chain Lake Road SE. A 10-foot wide landscaping buffer is provided adjacent to the southwest site boundary per MMC 18.10.140.

MMC section 18.84.120 states that a Preliminary Development Plan shall be approved if the plan meets the following criteria:

a) The PRD is in accordance with the comprehensive plan; and

b) The PRD accomplishes a development that is better than that resulting from traditional development and provides a net benefit to the city. A net benefit to the city may be demonstrated by the following:
- ***a. Conservation of natural features and sensitive area***
- ***b. Placement, style or design of structures***
- ***c. Recreational facilities***
- ***d. Interconnected usable open space***
- ***e. Provision of other public facilities***
- ***f. Aesthetic features and harmonious design***
- ***g. Energy-efficient site design and/or building features***

c) The PRD will be served by adequate public facilities including streets, fire protection, water, storm water drainage, and sanitary sewer for acceptable waste controls as demonstrated by the submittal and review of plans for such facilities as described under MMC 18.84.060.

d) The proposed landscaping within the PRD's perimeter is superior to that normally required by the city.

e) At least one major circulation point is functionally connected to a public right-of-way.

f) The open space within the PRD is integrated into the design of the project rather than an isolated element.

g) The PRD is compatible with the adjacent development.

h) Undeveloped land adjoining the PRD may be developed in coordination with the PRD.

i) The PRD is harmonious and appropriate in design, character, and appearance to the existing or intended character of development in the immediate vicinity.

j) Roads, streets and sidewalks, existing and proposed, comply with the standards and requirements of this chapter and the Monroe Municipal Code.

k) Each phase of the PRD, as it is completed, shall contain the required parking spaces, open space, recreation facilities, landscaping, and utility area planned for that phase.

A PRD developed under the R4 zoning district development standards is consistent with the City of Monroe 2015-2035 Comprehensive Plan Low Density SFR land use designation. A review of the development plans for the site against the above PRD criteria finds that the development would meet the above criteria. The development would meet the City's goals of conservation of natural areas and provision of recreational facilities. The site will be served by adequate public facilities and streets and is compatible with adjacent development. The park and recreation open space Tracts are integrated into the design of the project and are not isolated.

10. Critical Areas:
    There is a Category III wetland onsite. It has a standard 75-foot buffer based on a recent delineation by the project biologist. This buffer width will be maintained or exceeded to the extent practical within a protective critical area tract as required by City zoning and development standards. Portions of the standard buffer will be impacted and/or reduced by required development improvements. Mitigation for these buffer impacts will be provided either by buffer averaging, buffer enhancement and/or creation, or acquisition of offsite mitigation bank credits within the same drainage basin. Details regarding the onsite wetland, stream, and their associated buffers are provided by a Critical Areas Report (Talasaea, 03/4/2021) that is included with the overall permit application. The protection and enhancement of critical area and forested, permanent open space proposed by the project is consistent with both the policies of the Comprehensive Plan and specific objectives of the PRD code to retain natural and environmentally sensitive areas. The significant park and usable recreational open space areas provided by this project also add to the overall environmental benefit of the PRD as proposed.

11. Utilities:
    A PRD developed under the existing R4 zoning district standards has sufficient capacity available in the City's public water and sanitary sewer system to serve the proposed subdivision. All lots will connect to the City's water and sewer system. Sanitary sewer and water lines will be constructed in the proposed public rights-of-way in accordance with the City's Public Works Design and Construction Standards. The conceptual utilities plan is attached as Exhibit 13.

    As part of the civil plan review process, the applicant will install improvements to the stormwater system. Stormwater management will be designed to meet the requirements of the Department of Ecology Storm Water Management Manual for Western Washington (2012, as amended in December 2014) as administered by the City Engineer. Any future permitted activities, such as building permits, will also have to comply with the provisions of the Storm Water Management Manual in effect at the time of the vesting of the permit application. The manual currently in use is the 2014 update to the 2012 Department of Ecology Storm Water Management Manual for Western Washington.

12. Streets and Traffic:
    Access to the subdivision is proposed via Chain Lake Road, a collector street providing primary access to the US-2, SR-203 and the commercial areas of Monroe. The four local streets within the project will be public, with Road A providing a direct connection to Chain Lake Road, Road D providing a secondary emergency access to Chain Lake Road, and Roads B and C providing internal circulation within the plat. With the exception of two deviation requests, discussed in preceding Section 9(b) and following paragraph in this section, the design of the roads is in general conformance with the City's standards for local access roads. The plat includes four private access roads/tracts that are all less than or equal to 150-feet in length. The overall roadway layout is a direct response and consideration of the challenging site topography, critical areas, and 100-foot-wide PSE easement, all of which place constraints and limits on the developable areas of the site.

    The applicant has applied for two (2) deviation requests to the City's Public Works and Design Construction Standards (Exhibit 14). One deviation request is for a reduction in the pavement and right-of-way widths for a local access road classification. This deviation is necessary to mitigate the reduced developable area

of the site that result from topographic challenges and the significant encumbrance of onsite critical areas and the 100-foot wide PSE easement. The other is for a modified cul-de-sac from standard drawing 304 for the onsite cul-de-sac located in the northeast portion of the site. The deviation requests have been approved by the Public Works Department. All other road standards will comply with the City's Public Works and Design Construction Standards.

The proponent shall dedicate right-of-way for streets as shown on the proposed preliminary plat map. Frontage improvements, including curb, gutter, sidewalk and street trees shall be provided for all public streets within the subdivision. Frontage improvements along Chain Lake Road include curb and gutter, a landscape strip with street trees along the entire length of the property frontage. Construction of a ten-foot-wide bike/pedestrian trail along the frontage on Chain Lake Road is nearing completion as a previously approved City capital improvement project unrelated to the development of this property. Traffic control devices and street signs shall be installed prior to final plat approval, and all public roads within the subdivision shall be constructed in accordance with the City's Public Works Design and Construction Standards and installed by the developer to the satisfaction of the City prior to final plat approval.

Based on the Traffic Impact Analysis, prepared by Gibson Traffic Consultants, Inc., dated August 2021 (Exhibit 17), the development is anticipated to generate approximately 64 AM peak-hour trips and 85 PM peak-hour trips. The level of service analysis shows that all of the study intersections in the TIA are anticipated to operate within acceptable level of service thresholds.

Impacts to the City's transportation system are mitigated through the collection of traffic mitigation fees. In accordance with the City's traffic impact fee program under MMC Chapter 3.54, impact fees require a standard fee amount per dwelling unit as a condition of residential development within the City. Traffic impact fees shall be paid in accordance with MMC Chapter 3.54 and shall be based on the amount in effect at the time of payment.

13. Park and Recreation Usable Open Space:
The proposed subdivision provides four private neighborhood parks/tracts within the development. Tracts 990, 993, and 995 (66,461 sq. ft.) will provide active and passive recreation and will contain a soft surface trail, picnic tables, and benches. Tract 996 will have a play structure (Exhibit 12). Maintenance of the park, recreation, open space areas and critical areas Tract 999 shall be the responsibility of the homeowner's association.

Impacts to the City park and recreation system from the anticipated additional public park users will be mitigated. In accordance with the City's park impact mitigation fees established under MMC Chapter 3.52, impact fees require a standard fee amount per dwelling unit as a condition of residential development within the city. Park impact fees shall be paid in accordance with MMC 3.52. Park impact fees shall be based on the fee amount in effect at the time of payment.

Schools: Impacts to the Monroe Public Schools and the Snohomish School District in the form of additional students are addressed through mitigation programs. The City of Monroe has adopted the Monroe and Snohomish School Districts' 2020 - 2025 Capital Facilities Plan and imposes impact fees for schools in accordance with the plan and MMC Chapter 3.50. School impact fees require a standard fee amount per

dwelling unit as a condition of residential development within the city. School impact fees are based on the amount in effect at the time of payment.

RCW 58.17.110(2) requires the City to make a finding that the proposed subdivision assures "safe walking conditions for students who only walk to and from school." Students will be bussed from the development to Park Place Middle School and Monroe High School by the Monroe School District. Most grade school students will be bussed to Chain Lake Elementary School. The public streets created within the subdivision generally include sidewalks on all sides of the street where residential lots front public roadways as well as a sidewalk along the property frontage adjacent to Chain Lake Rd.

14. Impact Fees and Capital Improvements:
    Development shall be subject to all applicable MMC requirements specifically including and without limitations, all applicable impact fees, and capital improvement charges pursuant to MMC section or chapter 13.04.025, 13.08.272, 3.50, 3.52, and 3.54.

15. Preliminary Plat Expiration:
    Per MMC section 22.68.040(A)(5)(c), preliminary approval of a proposed plat shall be effective for a period not to exceed five years from the date of Hearing Examiner approval, or concurrently with the expiration of the preliminary plat, whichever occurs earlier.

E. CONCLUSIONS OF LAW

1. The City of Monroe 2015-2035 Comprehensive Plan Future Plan Map designation for the site is "Low Density SFR," which assumes an overall density of 3–5 dwelling units per acre. The site's present zoning designation of R4 is in compliance with the future land use designation adopted in the current Comprehensive Plan.

2. The proposed subdivision and PRD, as conditioned herein, will be consistent with the pertinent development goals and policies outlined in the Monroe 2015-2035 Comprehensive Plan.

3. The proposed subdivision, as conditioned herein, will be consistent with the applicable land division requirements outlined in MMC Title 17, Subdivisions.

4. The proposed subdivision, as conditioned herein, will be consistent with the pertinent development standards outlined in MMC Title 18, Planning and Zoning.

5. The proposed subdivision, as conditioned herein, will make appropriate provisions for public use and interest, health, safety, and general welfare.

F. STAFF RECOMMENDATION

Based on the Findings of Fact and Conclusions of Law detailed in the staff report, staff recommends that the Hearing Examiner **APPROVE** the Garibaldi Preliminary Plat and Planned Residential Development (project number PLPRD2018-02), subject to the following conditions of preliminary approval.

1. All improvements shall be constructed in accordance with the approved preliminary plat map (Exhibit 3). Minor modifications of the plans submitted, as described in MMC 22.68.040(G), may be approved by the Community Development Director or his/her designee if the modifications do not change the Findings of Fact or the Conditions of Approval.

2. Final engineering drawings depicting the street improvements, water and sewer improvements, and drainage design shall be submitted to the City's Public Works Director for final review and approval before issuance of any grading permits. The street, water and sewer, and drainage improvements shall be designed in accordance with the City's most current Public Works Design and Construction Standards.
3. The project shall implement all of the applicable recommendations contained in the following technical reports submitted to the City:
    a) Preliminary Storm Drainage Report, prepared by CPH Consultants, dated September 17, 2021 (Exhibit 16).
    b) Geotechnical Report, prepared by Terra Associates, Inc, dated December 14, 2018 and Memorandum dated September 16, 2021 (Exhibit 15).
    c) Traffic Report, prepared by Gibson Traffic Consultants, Inc., dated August 2021 (Exhibit 17).

CLEARING AND GRADING

4. A comprehensive erosion and sedimentation control plan to ensure appropriate on-site and off-site water quality control shall be developed and implemented for all construction activities. The Best Management Practices outlined in the 2014 DOE Stormwater Management Manual for Western Washington shall be incorporated into the design. At a minimum, the plan shall include the following elements:
    a. Exposed soils shall be stabilized and protected with straw, hydro-seeding or other appropriate materials to limit the extent and duration of exposure;
    b. Disturbed areas shall be protected from storm water runoff impacts through the use of silt fence. Other means of filtration of storm water runoff and for limiting erosion/sedimentation such as check dams, and sediment traps may be required and are recommended.
    c. Clearing and grading activities shall not be performed in the winter-wet season when soils are unstable.

5. Any wells located on the site shall be decommissioned prior to clearing and grading.

STORM DRAINAGE IMPROVEMENTS

6. The stormwater system design and stormwater discharge shall utilize the Best Management Practices of the 2014 DOE Stormwater Management Manual for Western Washington.

7. Stormwater pollution prevention measures shall be employed per the approved Stormwater Pollution Prevention Plan and as necessary to ensure appropriate on-site and off-site water quality control. Site runoff during construction shall be handled and treated as to quantity and quality impacts by utilizing Best Management Practices, as defined in the 2014 DOE Stormwater Management Manual for Western Washington.
8. The developer shall obtain a General Construction Stormwater NPDES Permit from the WA Department of Ecology (DOE) prior to beginning construction.

ROAD IMPROVEMENTS

9. Frontage improvements, including curb, gutter, sidewalk, street trees, and traffic control devices shall be provided for all streets within the subdivision; shall be constructed in accordance with the City's most current Public Works Design and Construction Standards; and are to be installed by the developer to the satisfaction of the City Engineer prior to final plat application.

CRITICAL AREAS

10. The project shall implement all of the applicable recommendations contained in the Critical Areas Study and Conceptual Mitigation Plan, prepared by Talasaea Consultants, Inc., dated March 4, 2021.
11. The applicant shall apply the applicable wetland protection requirements (physical and administrative) of MMC 20.05.070 Protection and mitigation measures (repealed) or its current equivalent MMC 22.80.080 including fencing and signage.

UTILITIES

12. PUD - Cost of any work, new or to upgrade, existing facilities that are required to connect this proposed development to the District electric system shall be in accordance with the applicable District policies. The District policy requires the developer to provide a IO-foot easement and an 8-foot clearance between any building/structures and transformers/switch cabinets upon its property for underground electrical facilities that must be installed to serve the proposed development.

LANDSCAPING

13. Street trees shall be provided per the approved landscape plan. Street trees shall be planted when a street frontage is fully owner occupied and as directed by the City of Monroe. The City will coordinate tree plantings to the most favorable time of the year for plant survival. All street frontage landscaping/irrigation improvements shall be bonded until such time that housing construction is completed and bonded work may be completed without risk of construction damage.

14. Irrigation is required for all street trees and newly planted vegetation. The applicant shall construct said irrigation system as consistent with a City-approved irrigation plan prior to construction.

FIRE

15. The following requirements shall be adhered to during construction and completed before occupancy of any structure in accordance with the 2018 International Fire Code:
    - Fire hydrants shall be provided in accordance with city standards and the direction of the Fire Marshal
    - Fire Hydrants shall be installed as per fire flow and spacing requirements specified for the type of development with regards to distances to structures;
    - Fire hydrants shall be equipped with four (4) inch quarter-turn Storz adapters;
    - An access route, for firefighting apparatus, must be provided at the start of construction. Minimum access route requirements include a 20’ width, 13’6” vertical height clearance, and the ability to support a load up to 75,000 pounds;
    - All buildings must be addressed visibly and legibly from the road. When buildings are not visible from the street, appropriate provisions must be made to identify clearly which road or drive serves the appropriate address including private roads.
    - No parking signs are required, as directed by the Fire Marshal, for all streets and access tracts with a width less than 32’ and within turnaround areas.

FEES

16. Prior to approval of the final plat, all landscaping associated with the plat shall require the submittal of an acceptable warranty surety to warrant all required landscaping improvements against defects in labor materials for a period of 24 months after

acceptance of those improvements by the City. The warranty amount shall be equal to fifteen (15) percent of the costs of the improvements, as determined by the Zoning Administrator.

17. Prior to approval of the final plat, the developer shall submit an acceptable warranty surety to warrant all required public improvements, installed, against defects in labor and materials for a period of 24 months after acceptance of those improvements by the City. The warranty amount shall be equal to ten (10) percent of the costs of the improvements, as determined by the Public Works Director. The surety shall be submitted to and approved by the City of Monroe and executed prior to final plat approval.

18. School, park, and traffic impact fees assessed in accordance with MMC Chapters 3.50, 3.52, and 3.54, respectively, shall be required and paid at the rate in effect at the time of building permit issuance.

19. The water system capital improvement charge, in accordance with MMC Section 13.04.025, shall be required and paid prior to building permit issuance.

20. The wastewater system capital improvement charge, in accordance with MMC Section 13.08.272, shall be required and paid prior to building permit issuance.

FINAL PLAT

21. Prior to Final Plat submittal, all improvements shall be installed, inspected, and approved by the City Engineer per the approved plans. All improvements shall be constructed in accordance with the approved engineering plans and preliminary plat map. Minor modifications of the plans submitted may be approved by the Zoning Administrator if the modifications do not change the Preliminary Plat Findings of Fact and/or Conditions of Approval.

22. All lot corners shall be installed with rod and cap or other City-approved survey method prior to Final Plat approval.

23. All existing and proposed easements and maintenance agreements shall be clearly shown and labeled on the final plat.

24. The following note shall appear on the face of the Final Plat Map: “The Homeowners Association is responsible for maintaining, in a uniform manner, all landscaping and irrigation within all commonly owned Tracts and easements.”

25. As this plat includes a dedication, the following Waiver of Claims for Damages Statement shall appear on the face of the Final Plat Map:

    This dedication includes conveyance of roads, tracts, utility and storm drainage infrastructure, and other areas of right-of-way intended for public use and/or ownership as shown on or otherwise referenced by the plat. The [insert name here] hereby waives all claims against the City of Monroe and/or any other governmental authority for damages which may occur to the adjacent land as a result of the construction, drainage and maintenance of such facilities and improvements.

26. If the final plat contains dedication of land for public purposes, it shall contain the following statement:

    Know all men by these presents that (name of developer) do hereby declare this plat and dedicate to the public forever all roads and ways and other public property

shown hereon, and the use thereof for any and all public purposes, with the right to make all necessary slopes for cuts and fills, and the right to continue to drain the roads and ways over and across any lot or lots, where water might take a natural course, in the original reasonable grading of the roads and ways shown hereon.

Following original reasonable grading of roads and ways hereon, no drainage waters on any lot or lots shall be diverted or blocked from their natural course so as to discharge upon any public road rights-of-way, or to hamper proper road drainage. Any enclosing of drainage waters in culverts or drains or rerouting thereof across any lot as may be undertaken by or for the owner of such lot shall be done by and at the expense of such owner, but only after approval by the city engineer.

27. The final plat shall provide space for the approving signatures of the zoning administrator, city engineer, and the mayor. The city clerk shall attest the signatures.

28. The title block on the final plat map shall have the names of all the legal owners of the property named on the plat and the name of the surveyor/engineering firm which prepared the final plat map.

29. An Auditor's Certificate shall be shown on the final plat map.

30. The following are required to be shown on the face of the final plat map:
    d) Surveyor Certificate;
    e) Correct legal description of all lots as set out in Chapter 58.17 RCW;
    f) Owners Statement;
    g) All new easement(s) over the property, their legal description(s) and associated dedication block(s);
    h) Recording block/Certification blocks for City approval;
    i) North arrow;
    j) Certification of Payment of Taxes and Assessments;
    k) Auditor's Certificate; and
    l) The survey control scheme, monumentation, basis of bearing and references.

MISCELLANEOUS

31. Preliminary plat approval shall be effective for no longer than the maximum time allowed pursuant to MMC 22.68.040(A)(5)(c).

32. If applicable, at the time of final plat submittal the developer shall submit a group mailbox plan, approved by the U.S. Post Office, to the Planning Department for final addressing.

33. Mail routes, including mailbox types and locations, shall be approved by the Postmaster prior to construction.

34. The developer shall submit a copy of the final plat to the Snohomish County Assessor's at 3000 Rockefeller Avenue, Everett, WA 98201-4060 for recording.

35. All construction equipment, building materials, and debris shall be stored on the applicant's property, out of the public right-of-way. In no case shall the access to any private or public property be blocked or impinged upon without prior consent from the affected property owners and the City of Monroe.

36. If at any time during clearing, grading and construction the streets are not kept clean and clear, all work will stop until the streets are cleaned and maintained in a manner acceptable to the Public Works Director.

37. Pursuant to MMC 6.04.055(B)(1), construction noise is not allowed between the hours of eight p.m. and seven a.m., Monday through Friday, and between the hours of eight p.m. and nine a.m., Saturday, Sunday, and legal holidays.

38. All signs, if any, shown on the approved plans for the subdivision are for illustrative purposes only. Pursuant to Monroe Municipal Code 22.50, a sign permit must be obtained for the placement of any non-exempt signage. An application for a sign permit shall include an approved site plan specifying the location of all signs.

39. The developer and contractor shall attend a pre-construction meeting with City staff to discuss expectations and limitations of the project permit before starting construction.

40. The developer shall provide the City with a bill of sale for all public improvements associated with the plat construction transferring ownership to the City. However, such transfer of ownership shall not relieve the developer of warranty obligations as defined in the MMC and the City's Public Works Design and Construction Standards.

41. All retaining walls shall be designed and constructed prior to final plat approval.

EXHIBIT 2

NW 1/4 SECTION 31, TOWNSHIP 28N, RANGE 7E. W.M.

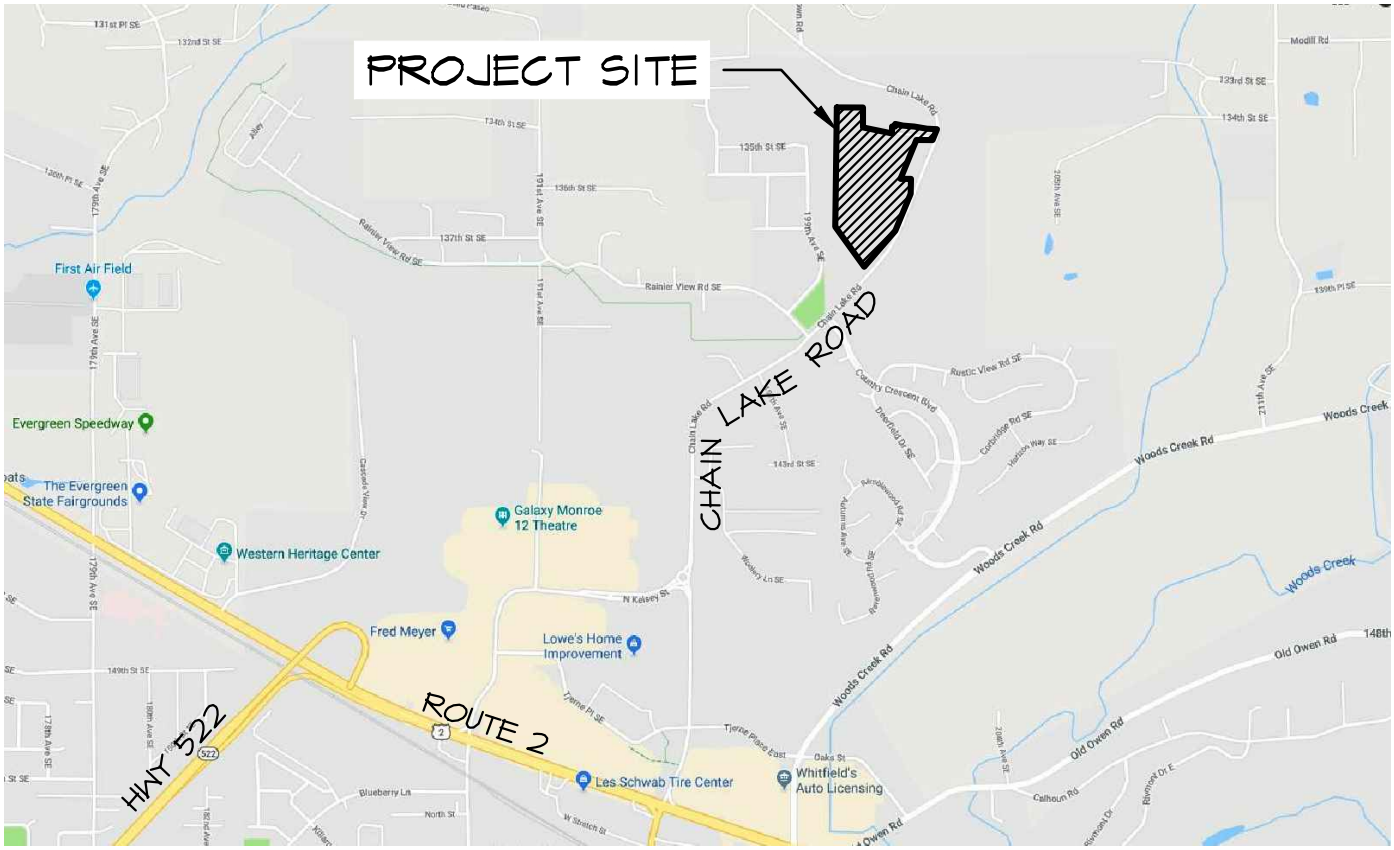


IMAGE SOURCE: GOOGLE MAPS, WWW.MAPS.GOOGLE.COM (ACCESSED 16 NOVEMBER 2018)

DRIVING DIRECTIONS:

1. FROM MONROE PLANNING AND DEVELOPMENT, HEAD NORTHEAST ON WEST MAIN STREET TOWARD VILLAGE WAY. CONTINUE FOR 0.6 MILES.
2. TURN LEFT ONTO S LEWIS STREET. CONTINUE FOR 0.2 MILES.
3. CONTINUE STRAIGHT ONTO 195TH AVENUE SE/CHAIN LAKE ROAD. CONTINUE FOR 2.0 MILES.
4. ARRIVE AT DESTINATION:

13424 CHAIN LAKE ROAD
MONROE, WASHINGTON 98272

NORTH

TALASAEA CONSULTANTS, INC.
Resource & Environmental Planning
15020 Bear Creek Road Northeast
Woodinville, Washington 98077
Bus (425)861-7550 - Fax (425)861-7549

FIGURE #1

VICINITY MAP & DRIVING DIRECTIONS
GARIBALDI PRD
MONROE, WASHINGTON

DESIGN	DRAWN	PROJECT
	FH	1684

SCALE: NTS
DATE: 11-28-2018
REVISED: 2-15-2021

1

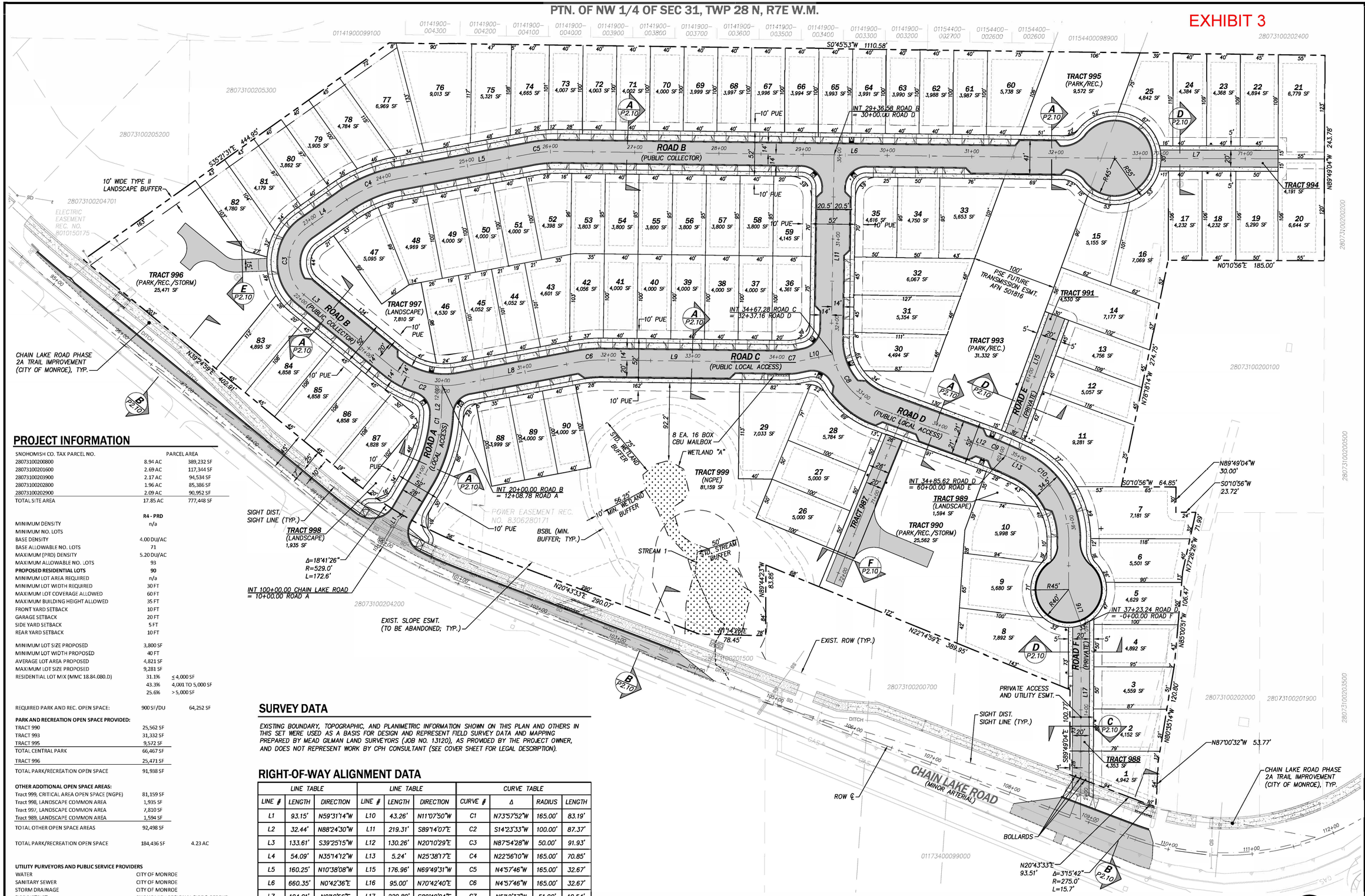
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OTOP541828
CSIT541828
TBLOCK
CNOT541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

EXHIBIT 3



PROJECT INFORMATION

SNOHOMISH CO. TAX PARCEL NO.	PARCEL AREA	
28073100200800	8.94 AC	389,232 SF
28073100201600	2.69 AC	117,344 SF
28073100203900	2.17 AC	94,534 SF
28073100202800	1.96 AC	85,386 SF
28073100202900	2.09 AC	90,952 SF
TOTAL SITE AREA	17.85 AC	777,448 SF

	R4 - PRD	
MINIMUM DENSITY	n/a	
MINIMUM NO. LOTS		
BASE DENSITY	4.00 DU/AC	
BASE ALLOWABLE NO. LOTS	71	
MAXIMUM (PRD) DENSITY	5.20 DU/AC	
MAXIMUM ALLOWABLE NO. LOTS	93	
PROPOSED RESIDENTIAL LOTS	**90**	
MINIMUM LOT AREA REQUIRED	n/a	
MINIMUM LOT WIDTH REQUIRED	30 FT	
MAXIMUM LOT COVERAGE ALLOWED	60 FT	
MAXIMUM BUILDING HEIGHT ALLOWED	35 FT	
FRONT YARD SETBACK	10 FT	
GARAGE SETBACK	20 FT	
SIDE YARD SETBACK	5 FT	
REAR YARD SETBACK	10 FT	
MINIMUM LOT SIZE PROPOSED	3,800 SF	
MINIMUM LOT WIDTH PROPOSED	40 FT	
AVERAGE LOT AREA PROPOSED	4,821 SF	
MAXIMUM LOT SIZE PROPOSED	9,281 SF	
RESIDENTIAL LOT MIX (MMC 18.84.080.D)	31.1%	≤ 4,000 SF
	43.3%	4,001 TO 5,000 SF
	25.6%	> 5,000 SF
REQUIRED PARK AND REC. OPEN SPACE:	900 SF/DU	64,252 SF

PARK AND RECREATION OPEN SPACE PROVIDED:	
TRACT 990	25,562 SF
TRACT 993	31,332 SF
TRACT 995	9,572 SF
TOTAL CENTRAL PARK	66,467 SF
TRACT 996	25,471 SF
TOTAL PARK/RECREATION OPEN SPACE	91,938 SF

OTHER ADDITIONAL OPEN SPACE AREAS:	
Tract 999, CRITICAL AREA OPEN SPACE (NGPE)	81,159 SF
Tract 998, LANDSCAPE COMMON AREA	1,935 SF
Tract 997, LANDSCAPE COMMON AREA	7,810 SF
Tract 989, LANDSCAPE COMMON AREA	1,594 SF
TOTAL OTHER OPEN SPACE AREAS	92,498 SF
TOTAL PARK/RECREATION OPEN SPACE	184,436 SF (4.23 AC)

UTILITY PURVEYORS AND PUBLIC SERVICE PROVIDERS	
WATER	CITY OF MONROE
SANITARY SEWER	CITY OF MONROE
STORM DRAINAGE	CITY OF MONROE
FIRE DISTRICT	SNOHOMISH REGIONAL FIRE & RESCUE
SCHOOL DISTRICT	MONROE SCHOOL DIST. NO. 103
POWER (ELECTRICITY)	PUGET SOUND ENERGY
NATURAL GAS	PUGET SOUND ENERGY

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

SURVEY DATA

EXISTING BOUNDARY, TOPOGRAPHIC, AND PLANIMETRIC INFORMATION SHOWN ON THIS PLAN AND OTHERS IN THIS SET WERE USED AS A BASIS FOR DESIGN AND REPRESENT FIELD SURVEY DATA AND MAPPING PREPARED BY MEAD GILMAN LAND SURVEYORS (JOB NO. 1.3120), AS PROVIDED BY THE PROJECT OWNER, AND DOES NOT REPRESENT WORK BY CPH CONSULTANT (SEE COVER SHEET FOR LEGAL DESCRIPTION).

RIGHT-OF-WAY ALIGNMENT DATA

LINE TABLE			LINE TABLE			CURVE TABLE			
LINE #	LENGTH	DIRECTION	LINE #	LENGTH	DIRECTION	CURVE #	Δ	RADIUS	LENGTH
L1	93.15'	N59°31'14"W	L10	43.26'	N11°07'50"W	C1	N73°57'52"W	165.00'	83.19'
L2	32.44'	N88°24'30"W	L11	219.31'	S89°14'07"E	C2	S14°23'33"W	100.00'	87.37'
L3	133.61'	S39°25'15"W	L12	130.26'	N20°10'29"E	C3	N87°54'28"W	50.00'	91.93'
L4	54.09'	N35°14'12"W	L13	5.24'	N25°38'17"E	C4	N22°56'10"W	165.00'	70.85'
L5	160.25'	N10°38'08"W	L15	176.96'	N69°49'31"W	C5	N4°57'46"W	165.00'	32.67'
L6	660.35'	N0°42'36"E	L16	95.00'	N70°42'40"E	C6	N4°57'46"W	165.00'	32.67'
L7	194.01'	N0°10'56"E	L17	229.89'	S89°49'04"E	C7	N5°12'37"W	51.00'	10.54'
L8	140.01'	N10°38'08"W				C8	N55°28'11"E	86.00'	105.95'
L9	219.45'	N0°42'36"E				C9	N22°54'23"E	474.00'	45.20'
						C10	N57°54'37"E	100.00'	112.65'

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PLAN IN FEET

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NO.	DATE	REVISION	BY	CK.
4	11/12/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — EXPIRES 10/6/2021 — PROFESSIONAL ENGINEER — 11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PRELIMINARY PLAT PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2280
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

PROJECT NO.
0054-18-028

DRAWING
P2.00

SHEET 4 OF 25

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EXHIBIT 4-A

RECEIVED COMPLETE 12/19/2018

MONROE
WASHINGTON

COMMUNITY DEVELOPMENT

806 West Main Street, Monroe, WA 98272
Phone (360) 794-7400 Fax (360) 794-4007
www.monroewa.gov

FOR OFFICE USE ONLY
PERMIT #(S) PLPRD2018-02
SEPA2018-13
App. #'s - 5465/5466/5467

COMBINED PERMIT APPLICATION

PERMIT SUBMITTAL HOURS

MONDAY – FRIDAY 8:00 – 12:00 / 1:00 – 5:00

Building

- ☐ Commercial T/I
- ☐ Demolition
- ☐ Garage/Carport
- ☐ Mechanical
- ☐ New Construction (Commercial/Residential)
- ☐ Plumbing
- ☐ Racking
- ☐ Residential Remodel
- ☐ Sign
- ☐ Other _____

Operations

- ☐ Engineering Review
- ☐ Fencing
- ☐ Grading
- ☐ Retaining wall
- ☐ Rockery
- ☐ Right-of-Way Disturbance
- ☐ Special Flood Hazard Area
- ☐ Utility Service
- ☐ Other _____

Fire

- ☐ Fire Alarm
- ☐ Fire Sprinkler
- ☐ High Piled Storage
- ☐ Hood Suppression
- ☐ Operational
- ☐ Spray Booth
- ☐ Tents & Canopies
- ☐ Other _____

Land Use

- ☐ Accessory Dwelling Unit
- ☐ Boundary Line Adjustment /Lot Consolidation
- ☐ Conditional/Special Use
- ☐ Land Clearing/Forest Practices
- ☒ Planned Residential Development
- ☐ Shoreline Permit
- ☐ Short Plat
- ☒ Subdivision/Plat
- ☐ Variance
- ☒ Other EDDS Deviation Request (Public Works road standards)

NOTE: All required Electrical Permits will be issued by the Dept. of Labor & Industries.

THIS APPLICATION WILL NOT BE ACCEPTED WITHOUT COMPLETED SUBMITTAL REQUIREMENTS

Site Address or Property Location: 13624 and 13424 Chain Lake Road, Monroe, 98272

Size of site (acre/square feet): 13.82 acres

Assessor's Tax Parcel Number (14 digits): 28073100200800, 28073100201600, 28073100203900

Applicant: Garibaldi Lake, LLC Phone # (425) 576-9390, x204

*Signature: _____ Printed Name: Mark Donner

Mailing Address: 1010 Market Street Fax # (_____) _____

City Kirkland State WA Zip 98033 E-mail mdavies@westcotthomes.com

Property Owner: Garibaldi Lake, LLC Phone # (_____) 576-9390, x204

**Signature: _____ Printed Name: Mark Donner

Mailing Address: 1010 Market Street Fax # (_____) _____

City Kirkland State WA Zip 98033 E-mail mdavies@westcotthomes.com

Attach a separate sheet for additional property owners/additional addresses

***Applicant: By your signature above, you hereby certify that the information submitted is true and correct and that you are authorized by the property owner(s) to act on their behalf.**

****Property Owners: by your signature above, you hereby certify that you have authorized the above applicant to make application on your behalf for this application.**

City of Monroe
Land Use Permit Application- Page 2

Give a detailed description below of the proposal / work. Provide details specific to your application e.g., current and proposed lot sizes, number of lots, description of driveway, description of proposed business including hours of operation, number of employees, existing and proposed parking spaces.

Forest Tax Reporting Account Number (if harvesting timber call the Department of Revenue at (800) 548-8829 for tax reporting information or to receive a tax number):

Detailed Description of work:

The project proposes to subdivide an assemblage of three existing real parcels totaling approximately 13.8 acres (280731-0020-0800, -1600, and -3900) into 61 detached single-family residential lots under the City's current subdivision and PRD code. Portions of the subject site front the west right-of-way of Chain Lake Road just south of 134th Street SE. Improvements include roadway widening and pedestrian facilities along the west side of Chain Lake Road along the site frontages, public roadway and pedestrian facilities onsite, storm drainage control facilities, and extension of existing City water and sanitary sewer mains from Chain Lake Road to serve the new residences. Modified road sections are proposed to mitigate and/or limit impacts to onsite critical areas and regional utility transmission easement encumbrances.

FOR OFFICE USE ONLY

Planning Application Fee: $2,750.00 x 2
Publication Fee: $300.00
Fire Plan Check Fee: $175.00 x 2
Mailing Fee: $225.00
SEPA Fee: $550.00
Technology Fee: $686.00
TOTAL FEES: $15,006.00

61 lots x $60.00 x 2 = $7,320.00
HE deposit = $2,500.00 x 2 = $5,000.00
Public Notice Board signs = $75.00

RECEIVED 12/19/2018

EXHIBIT 4-B

CP|H CONSULTANTS

Site Planning
Civil Engineering
Land Use Consulting
Project Management

December 5, 2018

Mr. Ben Swanson
Community Development Director
City of Monroe
806 W. Main Street
Monroe, WA 98272

Re: Garibaldi PRD — CPH Project No. 0054-18-028
Project Narrative

Mr. Swanson,

This project narrative is provided on behalf of my client, Garibaldi Lake, LLC, to complete the preliminary subdivision and planned residential development (PRD) application for the Garibaldi PRD project. The project proposes to subdivide an assemblage of three adjoining real parcels (Tax Parcel #'s 2803310020-0800, -1600, and -3900)) with a total area of approximately 13.82 acres in the City of Monroe, Washington into 61 new single-family residential lots. The site is located along the west frontage of Chain Lake Road just south of 134th Street SE and approximately 1,200 feet north of Rainier View Road. This narrative introduces the project and summarizes some of the key design and development considerations to facilitate the City's review, issuance of a final SEPA determination, and ultimate approval of the proposed preliminary subdivision and PRD permits.

SITE PLAN, DENSITY, AND DIMENSIONS

The preliminary site plan and supporting technical data submitted with this application are a result of discussion with City staff, coordination with the various members of the project team, and alternatives analyses. Monroe Municipal Code (MMC) Chapter 18.84 establishes a framework and criteria for the review and approval of PRDs in the City. The proposed project has been carefully designed in accordance with these and other provisions of the MMC as well as the current version of the City of Monroe Public Works Design and Construction Standards.

The properties that comprise the project site are currently zoned R4, *Low Density Residential*. This zoning designation and standard subdivision criteria allow the site to be subdivided into a base density of 55 single-family residential lots. City code section 18.84.120 provides for up to a 30 percent density bonus which would allow a total of 72 units base on the gross site acreage. The project proposes to subdivide the site into 61 single-family lots and several common open space tracts. All lot dimensions, coverage, and setbacks are proposed in accordance with MMC 18.10.140.

The current proposal to provide for less than the maximum allowable PRD yield is mostly a result of having to accommodate existing site encumbrances and natural features that limit developable area on the site. Site design is largely affected by the topography of the site. The site generally slopes southwest from the higher elevations at the north and west edges toward the east and south boundaries with a notable total elevation relief of approximately 86 feet. A large, steep knoll occupies the southeast portion of the site where the project's access road must be located (for sight distance). It also requires consideration of significant encumbrance by a 100-foot wide Puget Sound Energy (PSE) future transmission easement as well as an onsite wetland, stream, and associated buffers. The PSE easement effectively bisects the site and cannot contain any structures or facilities that would conflict with the potential future

installation of overhead electrical transmission lines. The onsite wetland is located in the southeast limits of the site and encumbers much of the portion of the frontage where access is to be taken. Each of these existing site encumbrances and their challenges on the development are discussed further in later sections of this narrative and the accompanying application documents.

ACCESS AND ROADWAYS

Site Access – Chain Lake Road

Access to the site is available from the west frontage of Chain Lake Road. The site's frontage is not contiguous or the full length of the site. There are two existing properties between the site and the right-of-way that interrupt its frontage length. Those "outlier" properties are not part of the project. The total length of Chain Lake Road frontage, including the outlier parcels, is approximately 864 feet. The project site occupies only 190 feet of this length at the south end and 108 feet at the north. The existing right-of-way width for the west half of Chain Lake Road is 30 feet at the project frontage and only 20 feet along the outlier parcels. The existing right-of-way parallels the project's east property line and then curves west immediately after the northeast and southeast site corners. Vehicle sight distance is constrained by these existing roadway geometric conditions.

Chain Lake Road is classified as a minor arterial with a 35 mph design speed. The City's typical arterial standard (standard drawing 300) requires 80 feet of right-of-way, 48 feet of pavement width, and a continuous planter and sidewalk each side of the roadway. The City is in the process of acquiring additional right-of-way along the west side of Chain Lake Road for roadway improvements that they currently have under design. The new road section would have 28 feet of pavement, vertical curb and gutter, a landscape strip, and an 8-foot concrete multi-use trail. It also includes a new centerline with a larger radius which locates it further west than the current centerline. The final, ultimate right-of-way width will be 45 feet west of this new centerline. The City expects to have completed the right-of-way acquisition in the first part of 2019 and funding to construct the proposed multi-use trail through 2020.

The location for the intersection of the project's access road at Chain Lake Road was evaluated based on a desired intersection sight distance (ISD) of 390 feet. The ISD decision point is typically located between 10 and 15 feet back from the travelled way of the intersecting road. This preliminary sight distance evaluation took a conservative approach and used a 15-foot setback for the decision point location. It also evaluated sight lines for two property conditions: (1) existing right-of-way and adjacent parcel lines with no sight distance easement over private property and (2) City's acquisition of full 45-foot wide west right-of-way measured from adjusted centerline. Condition 2 is the likely scenario that the project would be constructed under based on the current status of the City's acquisition efforts. Tables A and B summarize the available site distance based on this preliminary design:

Table A – Road A at Chain Lake Road Intersection Site Distance (feet)

Right-of-Way Condition	ISD South	ISD North
Existing (no sight easement)	277	227
Future (City acquisition)	425	660+

Table B – North Site at Chain Lake Road Intersection Site Distance (feet)

Right-of-Way Condition	ISD South	ISD North
Existing (no sight easement)	<10	186
Future (City acquisition)	410	280

These results confirm that an access road from the project's north frontage area would have insufficient sight distance. The proposed primary access road for the project (Road A) was located along the south site frontage where sight distance could be optimized and impacts to the onsite critical area buffer could be

minimized. The location of Road A provides the necessary sight distance with the City's acquisition of additional right-of-way.

Onsite Roads

The local streets within the project will be public and are proposed in general accordance with the City's standard for local access and collector classifications. Road A, the primary access road, is anticipated to be considered a local collector road because it extends through the site and could be extended by future developments to the north. The local access road, Road B, terminates at a cul-de-sac in the north portion of the site and provides direct access to several of the new residential lots. Two private access roads/drives are also proposed to extend from Road B to access a few of the lots in the north portion of the site. These roadway patterns are a direct response and consideration of the topographic, critical area, and PSE easement constraints that encumber and limit the developable areas of the site.

A deviation request to the City's engineering design and development standards is included with this application with justification for a reduction in the pavement and right-of-way widths for local access and collector road classifications. This deviation is necessary to mitigate the reduced developable area of the site that result from topographic challenges and the significant encumbrance of onsite critical areas and the 100-foot wide PSE easement.

The typical local access and collector road section for the project would have a right-of-way width of 52 feet and a pavement width of 30 feet, which compares to standard widths of 60 feet and 36 feet respectively. This modified road section is proposed primarily to mitigate the limited area and irregular geometry of the remaining developable areas of the site that result from the topographic, critical area, and PSE easement encumbrances. It also serves as an effective low impact development (LID) method by reducing the amount of pollution generating impervious surfacing of the overall development. The modified road section is integral to the site design, and it is allowed both by the provision of the PRD code as well as by section 1-3 of the Public Works Design and Construction Standards. A completed *Engineering Design and Development Standards Deviation Request* form with supporting documentation for this modified road section is included with this subdivision and PRD application.

Gibson Traffic Consultants (GTC) completed a traffic impact analysis (TIA) for the project and a copy of that report is included with this application. The TIA includes a level-of-service (vehicular circulation adequacy) evaluation. A total of four primary study intersections were analyzed as requested by City staff. GTC concluded from their analysis that "…*the level of service analysis shows that the development will not cause any intersection to operate at a deficient level of service…*"

SITE SOILS, GRADING, AND STORM DRAINAGE

The general soil classification of the developable portion of the site is characterized by the Natural Resources Conservation Service (NRCS) as Tokul gravelly medial loam, with 0 to 8 percent slopes and Tokul gravelly medial loam, 8 to 15 percent slopes. NRCS classifies Tokul gravelly medial loam soils as a Hydrologic Soil Group B and describes it as moderately well drained with a very low to moderately low infiltrative capacity. A site- and project-specific geotechnical engineering study is in process and will be completed and submitted to the City under separate cover for review and consideration prior to preliminary subdivision and PRD approval.

Notable topography exists on the site with a total relief of approximately 86 feet. The general slope of the existing site falls from higher elevations in the northwest and west boundaries toward the lower regions at the south and southeast boundaries. Developed site grades will generally maintain this condition. The site plan has been designed to limit earthwork and the extent and height of retaining walls, while also accommodating the restrictions of the PSE easement and the onsite critical areas. Site grading for the project also considers storm drainage collection and conveyance.

The site currently drains south and southeast within two separate basins. This general drainage pattern is maintained by the project's grading and storm drainage systems. A below-grade combined storm water

detention and water quality vault is proposed in the southeast corner of the site. This facility will both control the release rate and volumes and will provide basic water quality treatment of surface water runoff form the improved areas of the site prior to its release to offsite, downstream systems. Storm water runoff from onsite areas will be collected and conveyed to this vault by a system of catch basin inlets and below-grade pipes on the lots, open spaces, and within the public road/right-of-way. Low impact development (LID) storm water best management practices (BMPs) implemented by the proposed onsite drainage systems include full dispersion within the retained natural areas of Tract W for a limited number of lots and reduced impervious surfaces for the public roads.

Storm drainage facilities and controls are proposed with the project in accordance with the City's surface water design and applicable Public Works Design and Construction standards, which include adoption of the Department of Ecology's 2012 Stormwater Management Manual for Western Washington (SWMMWW) as amended in December 2014 (MMC 15.01.025). Additional information and details of the proposed storm drainage systems for the project is included in the Preliminary Storm Drainage Report (SDR) and preliminary subdivision plans provided with this application.

UTILITIES

Public water and sanitary sewer systems owned and operated by the City will be extended to provide service to the site. An 8-inch ductile iron water main is located in the east half of the existing Chain Lake Road right-of-way. This existing public water source will be extended into the property by two separate connections near the northeast and southeast regions of the site that are contiguous with Chain Lake Road. The new water main will loop through the site within the new public rights-of-way. The onsite water in Road A will be extended to a temporary blow off assembly at the north property boundary for connection by future development of the adjacent parcels.

Sanitary sewer mains were recently installed along the site's Chain Lake Road frontage by the Easton Cove project. This 8-inch PVC sewer system flows south along the west side of the road up to about the midpoint of the site where it then travels east and south again along the east side of the road. The project will extend two new sewer mains from two separate connections to this existing main—one to serve the north and central portion of the site and the other the west and southern portion of the project.

The enclosed preliminary subdivision and PRD plans provide additional detail of the proposed water and sewer systems for the project.

CRITICAL AREAS

An onsite wetland (Wetland A) and short stream reach (Stream I) occupy the lower, southeastern portion of the site. The wetland has been delineated and classified as a Category III with a standard 165-foot buffer and the stream is unclassified with a buffer that is encompassed completed by that of Wetland A. The wetland, stream, and their associated buffers encumber approximately 2.8 acres (120,272 square feet) of the existing site in the vicinity of its southerly frontage with Chain Lake Road.

The standard buffer width around Wetland A will be maintained or exceeded to the extent practical within a protective critical area tract as required by City zoning and development standards. Portions of the standard buffer will be impacted and/or reduced by required development improvements. Mitigation for these buffer impacts will be provided either by buffer averaging, buffer enhancement and/or creation, or acquisition of offsite mitigation bank credits within the same drainage basin. Details regarding the onsite wetland, stream, and their associated buffers are provided by a Critical Areas Report (Talasaea, 12/4/2018) that is included with the overall permit application.

PARKS, RECREATION, AND OPEN SPACE

The project provides a number of common open space and recreation areas dispersed throughout the site. The majority of these areas are contained in three tracts that bisect the site from east to west in the

vicinity of an existing Puget Sound Energy (PSE) future transmission line easement. These three park and recreation tracts will be graded and landscaped to facilitate a number of activities—passive and active.

The City's PRD code, MMC 18.84, stipulates the requirement for park and recreation open space, and specifies that it shall be provided at a ratio of 900 square feet per base dwelling unit for the R4 zone. The number of base units for this project is 55 which would require 49,752 square feet (1.14 acres) of park and recreation open space. The project proposes three formal park tracts (Tracts B, C, and D) that combine for 72,640 square feet (1.67 acres), or nearly 50% more area than the required minimum. The largest of the three tracts is 39,145 square feet (0.9 acre).

The three dedicated park and recreation tracts are contiguous in alignment and separated only by the two neighborhood roadways. As such, they effectively cover the full width of the central area of the project site, provide convenient access via the public sidewalks, and function as a single common park and recreation amenity. The proposed finished grading of the parks will be designed with the final engineering and construction permitting phase of the project as necessary to facilitate active program elements, passive uses, gathering spaces and pedestrian paths.

Other onsite landscape and open space areas are also proposed in addition to the formal park spaces. These include a large critical area tract (Tract W) containing preserved and enhanced forest areas around an onsite wetland and stream. Tract W maintains a natural amenity for the community that is located immediately adjacent to the southerly park area in Tract B and a number of the residential lots. A large landscaped storm drainage tract (Tract A) in the southeast portion of the site across the street from Tract W. A perimeter landscape tract (Tract E) in the northeastern-most corner of the site contiguous with the Chain Lake Road right-of-way and provides a visual buffer from the existing arterial and future public trail that is planned in that area. Tracts A, E, and W provide additional landscaped and/or established natural open space areas that are a benefit to the community by enhancing the aesthetic, protecting critical resources, and reducing storm water runoff.

Each of the tracts containing the different open space areas, amenities, and uses will be interconnected and directly accessed by public sidewalk facilities constructed with the project. The preliminary landscape plans included with this application include details for some of the park amenities proposed with the project. These include picnic tables, benches, sport court, and pathways and/or trails connecting the public sidewalks at their edges. Additional and/or modifications to the types and locations of the amenities within the park areas may be proposed for City approval with the subsequent final engineering design and construction permitting for the site improvements.

Please feel free to contact me directly if you have questions or require additional information to complete your review. I appreciate your time and efforts and look forward to working with you through the preliminary subdivision and PRD approval.

Thank you.

Sincerely,

CPH Consultants

Matthew J. Hough, PE
President

Cc: Ms. Melanie Davies (Westcott Homes, Inc.)
copy to file

EXHIBIT 5

MONROE
WASHINGTON

January 7, 2019

Garibaldi Lake, LLC
Mark Donner
1010 Market Street
Kirkland, WA 98033

RE: Notice of Complete Application for Garibaldi Preliminary Plat/PRD

File No. PLPRD2018-02

Dear Mr. Donner,

Your land use permit application which was submitted to the City of Monroe on December 19, 2018 for preliminary plat/planned residential development approval has been determined **COMPLETE** as of **January 7, 2019**. A complete application is not an approved application. A permit application is complete when it meets the submission requirements outlined in the Monroe Municipal Code. The City's determination of completeness does not preclude the City from requesting revisions, additional information or studies if new information is required, corrections are needed, or where there are substantial changes in the proposed action.

A decision will be made within 120 days of the date of the letter of completeness excluding time periods as described in MMC 21.50.110. If you have any questions and/or wish to discuss any portion of the enclosure of your application, please feel free to contact me at (360) 863-4513 or amarrero@monroewa.gov.

Sincerely,

Anita Marrero
Senior Planner

Cc: File
Matt Hough, PE, CPH Consultants, 11431 Willows Road NE, Suite 120, Redmond, WA 98052

City of Monroe
806 West Main Street, Monroe, WA 98272
Phone (360) 794-7400 Fax (360) 794-4007
www.monroewa.gov

DocuSign Envelope ID: FCB3F3C2-989C-47AC-8C0A-4DA3842C8FAD

EXHIBIT 6-A

COMMUNITY DEVELOPMENT

806 West Main Street, Monroe, WA 98272
Phone (360) 794-7400 Fax (360) 794-4007
www.monroewa.gov

FOR OFFICE USE ONLY
App. #5465
PERMIT #(s) SEPA 2018-13

RECEIVED
03/10/2021
CITY OF MONROE

COMBINED PERMIT APPLICATION

PERMIT SUBMITTAL HOURS

MONDAY – FRIDAY 8:00 – 12:00 / 1:00 – 5:00

Building

- ☐ Commercial T/I
- ☐ Demolition
- ☐ Garage/Carport
- ☐ Mechanical
- ☐ New Construction (Commercial/Residential)
- ☐ Plumbing
- ☐ Racking
- ☐ Residential Remodel
- ☐ Sign
- ☐ Other _____

Operations

- ☐ Engineering Review
- ☐ Fencing
- ☐ Grading
- ☐ Retaining wall
- ☐ Rockery
- ☐ Right-of-Way Disturbance
- ☐ Special Flood Hazard Area
- ☐ Utility Service
- ☐ Other _____

Fire

- ☐ Fire Alarm
- ☐ Fire Sprinkler
- ☐ High Piled Storage
- ☐ Hood Suppression
- ☐ Operational
- ☐ Spray Booth
- ☐ Tents & Canopies
- ☐ Other _____

Land Use

- ☐ Accessory Dwelling Unit
- ☐ Boundary Line Adjustment /Lot Consolidation
- ☐ Conditional/Special Use
- ☐ Land Clearing/Forest Practices
- ☒ Planned Residential Development
- ☐ Shoreline Permit
- ☐ Short Plat
- ☒ Subdivision/Plat
- ☐ Variance
- ☒ Other EDDS Deviation Request (Public Works road standards)

NOTE: All required Electrical Permits will be issued by the Dept. of Labor & Industries.

THIS APPLICATION WILL NOT BE ACCEPTED WITHOUT COMPLETED SUBMITTAL REQUIREMENTS

Site Address or Property Location: 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, 98272

Size of site (acre/square feet): 17.85 acres

Assessor's Tax Parcel Number (14 digits): 2807310020-0800, -1600, -3900, -2800, and -2900

Applicant: Garibaldi Lake, LLC Phone # (425) 576-9390, x204

*Signature: DocuSigned by: Gl Mark Donner 49E1F89AC00048D... Printed Name: Mark Donner

Mailing Address: 1010 Market Street Fax # (____) _____

City Kirkland State WA Zip 98033 E-mail mdavies@westcotthomes.com

Property Owner: Garibaldi Lake, LLC Phone # (____) 576-9390, x204

**Signature: DocuSigned by: Gl Mark Donner 49E1F89AC00048D... Printed Name: Mark Donner

Mailing Address: 1010 Market Street Fax # (____) _____

City Kirkland State WA Zip 98033 E-mail mdavies@westcotthomes.com

Attach a separate sheet for additional property owners/additional addresses

***Applicant: By your signature above, you hereby certify that the information submitted is true and correct and that you are authorized by the property owner(s) to act on their behalf.**

****Property Owners: by your signature above, you hereby certify that you have authorized the above applicant to make application on your behalf for this application.**

DocuSign Envelope ID: FCB3F3C2-989C-47AC-8C0A-4DA3842C8FAD

City of Monroe
Land Use Permit Application- Page 2

Give a detailed description below of the proposal / work. Provide details specific to your application e.g., current and proposed lot sizes, number of lots, description of driveway, description of proposed business including hours of operation, number of employees, existing and proposed parking spaces.

Forest Tax Reporting Account Number (if harvesting timber call the Department of Revenue at (800) 548-8829 for tax reporting information or to receive a tax number):

Detailed Description of work:

The project proposes to subdivide an assemblage of three existing real parcels totaling approximately 17.85 acres (280731-0020-0800, -1600, -3900, -2800, and -2900) into 90 detached single-family residential lots under the City's current subdivision and PRD code. Portions of the subject site front the west right-of-way of Chain Lake Road just south of 134th Street SE. Improvements include roadway widening and pedestrian facilities along the west side of Chain Lake Road along the site frontages, public roadway and pedestrian facilities onsite, storm drainage control facilities, and extension of existing City water and sanitary sewer mains from Chain Lake Road to serve the new residences. Modified road sections are proposed to mitigate and/or limit impacts to onsite critical areas and regional utility transmission easement encumbrances.

FOR OFFICE USE ONLY

Planning Application Fee:_____ Publication Fee:_____
Fire Plan Check Fee:_____ Mailing Fee: _____
SEPA Fee: _____ Technology Fee:_____
TOTAL FEES:_____

DocuSign Envelope ID: FCB3F3C2-989C-47AC-8C0A-4DA3842C8FAD

PUBLIC NOTICE MATERIALS
COMMUNITY DEVELOPMENT

806 WEST MAIN STREET • MONROE, WA 98272
City Hall 360.794.7400• Fax 360.794.4007

INSTRUCTIONS:

Below is a checklist of items that must be submitted as part of your permit application or land use request as indicated in the Submittal Checklist. Numbers in parenthesis equal the number of copies required. Please use only paper clips and/or binder clips when assembling documents.

These materials must be submitted concurrently with all other required submittals as indicated in the Submittal Checklist.

- For your convenience, when requesting these materials from Snohomish County, links to access their request forms are listed below.

Instructions for records requests:

http://snohomishcountywa.gov/1704/Public-Records

Form 1: Record Request
http://snohomishcountywa.gov/DocumentCenter/View/18735
Form 2: Release for List of Individuals
http://snohomishcountywa.gov/DocumentCenter/View/18736

- These materials can also be obtained through any Title Company.

SUBMITTAL CHECKLIST :

- ◊ (1) Snohomish County Assessor's Quarter Section Map including the following:
  - ♦ Show Subject Property
  - ♦ Show 500 ft. Boundary
- ◊ (1) Current Owner List (of properties within 500ft. radius) hard copy
- ◊ (1) Current Owner List (of properties within 500ft. radius) submitted electronically in an excel spreadsheet format with the following:
  - ♦ Tax Parcel ID Number(s)
  - ♦ Owner(s) Full Name(s)
  - ♦ Owner(s) Mailing Address(es)
- ♦ Include "Current Resident" & Mailing Address (if property owner doesn't reside at the property)

EXHIBIT 6-B

C|P|H CONSULTANTS

Site Planning
Civil Engineering
Landscape Architecture
Land Use Consulting
Project Management

March 5, 2021

RECEIVED
03/10/2021
CITY OF MONROE

Mr. Ben Swanson
Community Development Director
City of Monroe
806 W. Main Street
Monroe, WA 98272

Re: Garibaldi PRD — CPH Project No. 0054-18-028
Project Narrative

Mr. Swanson,

This project narrative is provided on behalf of my client, Garibaldi Lake, LLC, to complete the preliminary subdivision and planned residential development (PRD) application for the Garibaldi PRD project. The project proposes to subdivide an assemblage of five adjoining real parcels (Tax Parcel #'s 2807310020-0800, -1600, -3900, -2800, and -2900) with a total area of approximately 17.85 acres in the City of Monroe, Washington into 90 new single-family residential lots. The site is located along the west frontage of Chain Lake Road just south of 134th Street SE and approximately 605 feet north of Rainier View Road. This narrative introduces the project and summarizes some of the key design and development considerations to facilitate the City's review, issuance of a final SEPA determination, and ultimate approval of the proposed preliminary subdivision and PRD permits.

SITE PLAN, DENSITY, AND DIMENSIONS

The preliminary site plan and supporting technical data submitted with this application are a result of discussion with City staff, coordination with the various members of the project team, and alternatives analyses. Monroe Municipal Code (MMC) Chapter 18.84 establishes a framework and criteria for the review and approval of PRDs in the City. The proposed project has been carefully designed in accordance with these and other provisions of the MMC as well as the current version of the City of Monroe Public Works Design and Construction Standards.

The properties that comprise the project site are currently zoned R4, *Low Density Residential*. This zoning designation and standard subdivision criteria allow the site to be subdivided into a base density of 71 single-family residential lots. City code section 18.84.120 provides for up to a 30 percent density bonus which would allow a total of 93 units based on the gross site acreage. The project proposes to subdivide the site into 90 single-family lots and several common open space tracts. All lot dimensions, coverage, and setbacks are proposed in accordance with MMC 18.10.140.

The current proposal to provide for less than the maximum allowable PRD yield is mostly a result of having to accommodate existing site encumbrances and natural features that limit developable area on the site. Site design is largely affected by the topography of the site. The site generally slopes southwest from the higher elevations at the north and west edges toward the east and south boundaries with a notable total elevation relief of approximately 110 feet. A large, steep knoll occupies the southeast portion of the site where the project's access road must be located (for sight distance). It also requires consideration of significant encumbrance by a 100-foot wide Puget Sound Energy (PSE) future transmission easement as well as an onsite wetland, stream, and associated buffers. The PSE easement effectively bisects the site and cannot contain any structures or facilities that would conflict with the potential future

installation of overhead electrical transmission lines. The onsite wetland is located in the southeast limits of the site and encumbers much of the portion of the frontage where access is to be taken. Each of these existing site encumbrances and their challenges on the development are discussed further in later sections of this narrative and the accompanying application documents.

ACCESS AND ROADWAYS

Site Access – Chain Lake Road

Access to the site is available from the west frontage of Chain Lake Road. The site's frontage is not contiguous or the full length of the site. There are two existing properties between the site and the right-of-way that interrupt its frontage length. Those "outlier" properties are not part of the project. The total length of Chain Lake Road frontage, including the outlier parcels, is approximately 1,453 feet. The project site occupies only 876 feet of this length at the south end and 109 feet at the north. The existing right-of-way width for the west half of Chain Lake Road is 30 feet at the project frontage and only 20 feet along the outlier parcels. The existing right-of-way parallels the project's east property line and then curves west immediately after the northeast and southeast site corners. Vehicle sight distance is constrained by these existing roadway geometric conditions.

Chain Lake Road is classified as a major collector with a 35 mph design speed. The City's typical arterial standard (standard drawing 300) requires 80 feet of right-of-way, 48 feet of pavement width, and a continuous planter and sidewalk each side of the roadway. The City recently acquired right-of-way at the west side of Chain Lake Road along the frontage of the site and adjacent properties to provide an ultimate west-half width of 45 feet. This acquisition was completed to facilitate their pending Chain Lake Road Phase 2A Trail Improvement project. That project includes clearing, grading, and limited storm drainage improvements for a new multi-use trail with 10 feet of concrete pavement and 2-foot gravel shoulders each side. The City provided the project with direction to widen the existing roadway pavement and install vertical curb and gutter at a 17-foot offset from the new Chain Lake Road right-of-way centerline located 45 feet from the newly acquired west right-of-way limit. This section is reflected in the accompanying plans and best illustrated on drawings P2.00 and P2.10.

The location for the intersection of the project's access road at Chain Lake Road was evaluated based on a desired intersection sight distance (ISD) of 390 feet. The ISD decision point is typically located between 10 and 15 feet back from the travelled way of the intersecting road. This preliminary sight distance evaluation took a conservative approach and used a 15-foot setback from the travel lane (12-foot offset centerline) for the decision point location. Table A summarize the available site distance for the project based on this preliminary design:

Table A –Chain Lake Road Intersection Site Distance (feet)

Access Point	ISD South	ISD North
Road A (public road; primary site access)	390+ feet	390+ feet
Road F (EVA only; secondary site access)	390+ feet	299 feet

Onsite Roads

The local streets within the project will be public and are proposed in general accordance with the City's standard for local access and collector classifications. Road A, the primary access road, is anticipated to be considered a local collector road because it extends through the site and could be extended by future developments to the north. The local access road, Road B, terminates at a cul-de-sac in the north portion of the site and provides direct access to several of the new residential lots. Two private access roads/drives are also proposed to extend from Road B to access a few of the lots in the north portion of the site. These roadway patterns are a direct response and consideration of the topographic,

critical area, and PSE easement constraints that encumber and limit the developable areas of the site.

A deviation request to the City's engineering design and development standards is included with this application with justification for a reduction in the pavement and right-of-way widths for local access and collector road classifications. This deviation is necessary to mitigate the reduced developable area of the site that result from topographic challenges and the significant encumbrance of onsite critical areas and the 100-foot wide PSE easement.

The typical local access road section for the project would have a standard right-of-way width of 52 feet and a minimum pavement width of 28 feet where there is no on-street parking up to 41 feet where parking is located on both sides of the street. This compares to a City standard right-of-way width of 60 feet and a pavement width of 36 feet. This modified road section is proposed primarily to mitigate the limited area and irregular geometry of the remaining developable areas of the site that result from the topographic, critical area, and PSE easement encumbrances. It also serves as an effective low impact development (LID) method by reducing the amount of pollution generating impervious surfacing of the overall development. The modified road section is integral to the site design, and it is allowed both by the provision of the PRD code as well as by section 1-3 of the Public Works Design and Construction Standards. A completed *Engineering Design and Development Standards Deviation Request* form with supporting documentation for this modified road section is included with this subdivision and PRD application.

Gibson Traffic Consultants (GTC) completed a traffic impact analysis (TIA) for the project and a copy of that report is included with this application. The TIA includes a level-of-service (vehicular circulation adequacy) evaluation. A total of four primary study intersections were analyzed as requested by City staff. GTC concluded from their analysis that "…*the level of service analysis shows that the development will not cause any intersection to operate at a deficient level of service*..."

SITE SOILS, GRADING, AND STORM DRAINAGE

The general soil classification of the developable portion of the site is characterized by the Natural Resources Conservation Service (NRCS) as Tokul gravelly medial loam, with 0 to 8 percent slopes and Tokul gravelly medial loam, 8 to 15 percent slopes. NRCS classifies Tokul gravelly medial loam soils as a Hydrologic Soil Group B and describes it as moderately well drained with a very low to moderately low infiltrative capacity. A site- and project-specific geotechnical engineering study is in process and will be completed and submitted to the City under separate cover for review and consideration prior to preliminary subdivision and PRD approval.

Notable topography exists on the site with a total relief of approximately 95 feet. The general slope of the existing site falls from higher elevations in the northwest and west boundaries toward the lower regions at the south and southeast boundaries. Developed site grades will generally maintain this condition. The site plan has been designed to limit earthwork and the extent and height of retaining walls, while also accommodating the restrictions of the PSE easement and the onsite critical areas. Site grading for the project also considers storm drainage collection and conveyance.

The site currently drains south and southeast within two separate basins. This general drainage pattern is maintained by the project's grading and storm drainage systems. A below-grade combined storm water detention and water quality vault is proposed in the southeast corner of the site. This facility will both control the release rate and volumes and will provide basic water quality treatment of surface water runoff form the improved areas of the site prior to its release to offsite, downstream systems. Storm water runoff from onsite areas will be collected and conveyed to this vault by a system of catch basin inlets and below-grade pipes on the lots, open spaces, and within the public road/right-of-way. Low impact development (LID) storm water best management practices (BMPs) implemented by the proposed onsite drainage systems include full dispersion within the retained natural areas of Tract W for a limited number of lots and reduced impervious surfaces for the public roads.

Storm drainage facilities and controls are proposed with the project in accordance with the City's surface water design and applicable Public Works Design and Construction standards, which include adoption of the Department of Ecology's 2012 Stormwater Management Manual for Western Washington (SWMMWW) as amended in December 2014 (MMC 15.01.025). Additional information and details of the proposed storm drainage systems for the project is included in the Preliminary Storm Drainage Report (SDR) and preliminary subdivision plans provided with this application.

UTILITIES

Public water and sanitary sewer systems owned and operated by the City will be extended to provide service to the site. An 8-inch ductile iron water main is located in the east half of the existing Chain Lake Road right-of-way. This existing public water source will be extended into the property by two separate connections near the northeast and southeast regions of the site that are contiguous with Chain Lake Road. The new water main will loop through the site within the new public rights-of-way. The onsite water in Road A will be extended to a temporary blow off assembly at the north property boundary for connection by future development of the adjacent parcels.

Sanitary sewer mains were recently installed along the site's Chain Lake Road frontage by the Easton Cove project. This 8-inch PVC sewer system flows south along the west side of the road up to about the midpoint of the site where it then travels east and south again along the east side of the road. The project will extend two new sewer mains from two separate connections to this existing main—one to serve the north and central portion of the site and the other the west and southern portion of the project.

The enclosed preliminary subdivision and PRD plans provide additional detail of the proposed water and sewer systems for the project.

CRITICAL AREAS

An onsite wetland (Wetland A) and short stream reach (Stream I) occupy the lower, southeastern portion of the site. The wetland has been delineated and classified as a Category III with a standard 75-foot buffer and the stream is unclassified with a buffer that is encompassed completed by that of Wetland A. The wetland, stream, and their associated buffers encumber approximately 1.2 acres (50,928 square feet) of the existing site in the vicinity of its southerly frontage with Chain Lake Road.

The standard buffer width around Wetland A will be maintained or exceeded to the extent practical within a protective critical area tract as required by City zoning and development standards. Portions of the standard buffer will be impacted and/or reduced by required development improvements. Mitigation for these buffer impacts will be provided either by buffer averaging, buffer enhancement and/or creation, or acquisition of offsite mitigation bank credits within the same drainage basin. Details regarding the onsite wetland, stream, and their associated buffers are provided by a Critical Areas Report (Talasaea, 3/4/2021) that is included with the overall permit application.

PARKS, RECREATION, AND OPEN SPACE

The project provides a number of common open space and recreation areas dispersed throughout the site. The majority of these areas are contained in three tracts that bisect the site from east to west in the vicinity of an existing Puget Sound Energy (PSE) future transmission line easement. These three park and recreation tracts will be graded and landscaped to facilitate a number of activities—passive and active.

The City's PRD code, MMC 18.84, stipulates the requirement for park and recreation open space, and specifies that it shall be provided at a ratio of 900 square feet per base dwelling unit for the R4 zone. The number of base units for this project is 71 which would require a minimum 64,252 square feet (1.48 acres) of park and recreation open space. The project proposes to improve four park/recreation tracts (Tracts 990, 993, 995, and 996) that combine for 93,289 square feet (2.14 acres), or nearly 45% more area

than the minimum required. The largest of the improved tracts is Tract 993 at 31,332 square feet (0.72 acre).

Three of the dedicated park and recreation tracts—Tracts 990, 993, and 995—total approximately 67,800 square feet (1.55 acres) and are contiguous in alignment and separated only by the two neighborhood roadways. As such, they effectively cover the full width of the central area of the project site, provide convenient access via the public sidewalks, and function as a single common park and recreation amenity. The proposed finished grading of the parks will be designed with the final engineering and construction permitting phase of the project as necessary to facilitate active program elements, passive uses, gathering spaces and pedestrian paths.

Other onsite landscape and open space amenities are also proposed in addition to the formal park/recreation spaces. These include a large critical area tract (Tract 999) containing preserved and enhanced native vegetation areas around an onsite wetland and stream. The approximately 79,800 square feet (1.8-acre) Tract 999 maintains a natural amenity for the community that is located immediately adjacent to the southerly park area in Tract 993 and a number of the residential lots. Additional common area tracts—Tracts 998, 997, and 989—will be vegetated to provide other natural landscaping amenities to that benefit to the community by enhancing the aesthetic, protecting critical resources, and reducing storm water runoff.

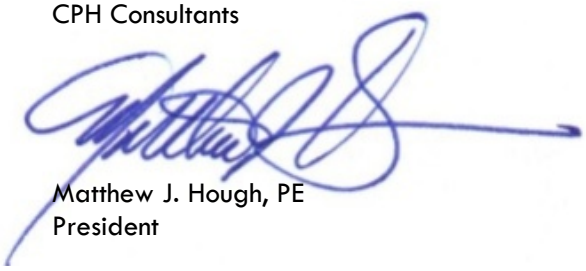
Each of the tracts containing the different open space areas, amenities, and uses will be interconnected and directly accessed by public sidewalk facilities constructed with the project. The preliminary landscape plans included with this application include details for some of the park amenities proposed with the project. These include picnic tables, benches, sport court, and pathways and/or trails connecting the public sidewalks at their edges. Additional and/or modifications to the types and locations of the amenities within the park areas may be proposed for City approval with the subsequent final engineering design and construction permitting for the site improvements.

Please feel free to contact me directly if you have questions or require additional information to complete your review. I appreciate your time and efforts and look forward to working with you through the preliminary subdivision and PRD approval.

Thank you.

Sincerely,

CPH Consultants



Matthew J. Hough, PE
President

Cc: Ms. Melanie Davies (Westcott Homes, Inc.)
copy to file

EXHIBIT 6-C

C|P|H CONSULTANTS

Site Planning
Civil Engineering
Landscape Architecture
Land Use Consulting
Project Management

March 3, 2021

RECEIVED
03/10/2021
CITY OF MONROE

Community Development Director
City Review Staff
City of Monroe
806 West Main Street
Monroe, WA 98272

Re: Garibaldi PRD—CPH Project No. 0054-18-028
Consistency with Planned Residential Development (PRD) Decision Criteria

Mr. Swanson and City Review Staff,

The *Garibaldi PRD* project is a proposed Planned Residential Development (PRD) conforming with the provisions of vested City of Monroe municipal code (MMC) 18.84.120. This new 90-lot residential community will occupy an assemblage of five existing real parcels totaling approximately 17.85 acres in the City of Monroe, Washington. The properties that comprise the project site are currently zoned R4, *Low Density Residential*. The site is allowed a base density of 71 residential lots based on this zoning designation and the standard subdivision criteria. MMC 18.84.120 provides for up to a 30 percent density bonus which would allow a total of 90 units based on the gross site acreage. This letter of consistency with the PRD decision criteria is accompanied by and as a part of a complete subdivision and PRD application to the City of Monroe, which includes preliminary site and development plans. Reduced copies of the *Preliminary Site Plan* and *Parks, Recreation, and Open Space Plan* are enclosed with this correspondence for reference and convenience.

The *Garibaldi* PRD project is proposing 90 new detached single-family residential homes. This current plan for less than the allowable maximum yield is mostly a result of having to accommodate existing site encumbrances and natural features that limit developable area on the site. These include a 100-foot Puget Sound Energy (PSE) easement for future electrical transmission facilities, an onsite wetland and stream (including buffer area), and areas of steep topography. The PSE easement effectively bisects the site and cannot contain any structures or facilities that would conflict with the potential future installation of overhead electrical transmission lines. The onsite wetland is located in the southeast limits of the site and encumbers much of the portion of the frontage where access is to be taken. The general topography of the site slopes southwest from the higher elevations at the north and west edges toward the east and south boundaries with a notable total elevation relief of approximately 86 feet. A large, steep knoll occupies the center of the eastern portion of the site just north of the project's access road.

The site plan that accompanies this PRD application has been designed consistent with the intent of MMC 18.84 to promote "…creativity in site layout and design…to protect and enhance environmental features, and provide other public benefits." These objectives were achieved in-part out of necessity to accommodate the existing topographic conditions, onsite critical areas, and the encumbrance of the PSE easement corridor. It takes the significant portion of undevelopable areas and integrates them into active and passive recreation amenities for the site. The overall park, recreation, and open space areas/program have been designed to be coincide with the area encumbered by the PSE easement. Reduced roadway sections are proposed as allowed by the provisions of a PRD to limit impacts to the onsite critical areas buffer as well as to optimize the remaining developable portion of the site.

The following is a summary of the key elements of the project as they conform to the decision criteria listed in MMC 18.84.120:

A. The PRD is in accordance with the comprehensive plan

The City's Comprehensive Plan designates the properties that are the subject of this PRD subdivision as Low Density Single-family Residential (R4) zoning. The project conforms to the bulk requirements specified by Monroe Municipal Code (MMC) 18.10.140 for the R4 zone. The project proposes to improve and extend existing public roads, storm drainage, water, and sanitary sewer systems within existing and future public rights-of-way consistent with the goals and policies of the Comprehensive Plan for provision of public services.

There is a Category III wetland onsite. It has a standard 75-foot buffer based on a recent delineation by the project biologist. This buffer width will be maintained or exceeded to the extent practical within a protective critical area tract as required by City zoning and development standards. Portions of the standard buffer will be impacted and/or reduced by required development improvements. Mitigation for these buffer impacts will be provided either by buffer averaging, buffer enhancement and/or creation, or acquisition of offsite mitigation bank credits within the same drainage basin. Details regarding the onsite wetland, stream, and their associated buffers are provided by a Critical Areas Report (Talasaea, 03/4/2021) that is included with the overall permit application. The protection and enhancement of critical area and forested, permanent open space proposed by the project is consistent with both the policies of the Comprehensive Plan and specific objectives of the PRD code to retain natural and environmentally sensitive areas. The significant park and usable recreational open space areas provided by this project also add to the overall environmental benefit of the PRD as proposed.

The project's proposal to reduce the roadway pavement section is consistent and supportive of the City's adopted policies and applicable development codes to implement low impact development (LID) storm water techniques by reducing pollution generating impervious coverage

B. The PRD accomplishes a development that is better than that resulting from traditional development and provides a net benefit to the city. A net benefit to the city may be demonstrated by the following:

1. Conservation of natural features and sensitive area,

The current site is comprised of mostly cleared areas with lawn, pasture, and gravel driveways as land cover. The south and southeast portion of the site is mostly forest-type cover with mature deciduous and evergreen trees. The southeast portion of the site also contains an existing wetland and small stream along with their associated forested buffers. The project proposes to avoid direct impacts to the wetland and stream. Portions of the buffer for these resource that is to be contained in a protective tract boundary are currently cleared pasture areas. The project proposes to enhance those areas with plants and trees consistent with the existing native vegetation in the forested areas.

2. Placement, style or design of structures,

The residential lots within the PRD maintain a mixture of lot sizes consistent with MMC 18.84.080.H(15) and, thus, will also accommodate a variety of building elevations. The mixture of lot sizes and building product will likely also result in some variation in sales pricing. Example building footprints, elevations, materials, and colors that are anticipated for this project are not included with this application, but can be made available upon request if that information is necessary or would be helpful in the City's review.

3. Recreational facilities,

The project provides a number of common open space and recreation areas dispersed throughout the site. The majority of these areas are contained in three tracts that bisect the site from east to west in the vicinity of an existing Puget Sound Energy (PSE) future transmission line easement. These three park and recreation tracts will be graded and landscaped to facilitate a number of activities—passive and active. Amenities within these park areas will include benches, picnic tables, sport court, and trails and paths to connect different areas of the park spaces and residential areas.

The City's PRD code, MMC 18.84, stipulates the requirement for park and recreation open space, and specifies that it shall be provided at a ratio of 900 square feet per base dwelling unit for the R4 zone. The number of base units for this project is 71 which would require a minimum 64,252 square feet (1.48 acres) of park and recreation open space. The project proposes to improve four park/recreation tracts (Tracts 990, 993, 995, and 996) that combine for 93,289 square feet (2.14 acres), or nearly 45% more area than the minimum required. The largest of the improved tracts is Tract 993 at 31,332 square feet (0.72 acre).

Three of the dedicated park and recreation tracts—Tracts 990, 993, and 995—total approximately 67,800 square feet (1.55 acres) and are contiguous in alignment and separated only by the two neighborhood roadways. As such, they effectively cover the full width of the central area of the project site, provide convenient access via the public sidewalks, and function as a single common park and recreation amenity. The proposed finished grading of the parks will be designed with the final engineering and construction permitting phase of the project as necessary to facilitate active program elements, passive uses, gathering spaces and pedestrian paths.

Other onsite landscape and open space amenities are also proposed in addition to the formal park/recreation spaces. These include a large critical area tract (Tract 999) containing preserved and enhanced native vegetation areas around an onsite wetland and stream. The approximately 79,800 square feet (1.8-acre) Tract 999 maintains a natural amenity for the community that is located immediately adjacent to the southerly park area in Tract 993 and a number of the residential lots. Additional common area tracts—Tracts 998, 997, and 989—will be vegetated to provide other natural landscaping amenities to that benefit to the community by enhancing the aesthetic, protecting critical resources, and reducing storm water runoff.

Each of the tracts containing the different open space areas, amenities, and uses will be interconnected and directly accessed by public sidewalk facilities constructed with the project. The preliminary landscape plans included with this application include details for some of the park amenities proposed with the project. These include picnic tables, benches, sport court, and pathways and/or trails connecting the public sidewalks at their edges. Additional and/or modifications to the types and locations of the amenities within the park areas may be proposed for City approval with the subsequent final engineering design and construction permitting for the site improvements.

4. Interconnected usable open space,

The project provides a number of common open space and recreation areas dispersed throughout the site. The majority of these areas are contained in three tracts that bisect the site from east to west in the vicinity of an existing Puget Sound Energy (PSE) future transmission line easement. These three park and recreation tracts will be graded and landscaped to facilitate a number of activities—passive and active. Amenities within these park areas will include benches, picnic

tables, sport court, and trails and paths to connect different areas of the park spaces and residential areas.

The three centralized park and recreation tracts are contiguous in alignment and separated only by the two neighborhood roadways. As such, they effectively cover the full width of the central area of the project site, provide convenient access via the public sidewalks, and function as a single common park and recreation amenity. The proposed finished grading of the parks will be designed with the final engineering and construction permitting phase of the project as necessary to facilitate active program elements, passive uses, and pedestrian paths. These park areas are interconnected and easily accessed from each of the residential lots within the community by a continuous series of concrete sidewalks.

5. Provision of other public facilities,

The project will improve the existing frontage of Chain Lake Road based on a new alignment and right-of-way width proposed by the City for their trail project. This new horizontal extent of Chain Lake Road intends to improve safety and sight distance, and will provide a multi-use trail parallel to its western edge. The proposed site plan, grading, access location, and storm drainage facilities for the project have all been designed to accommodate the City's.

The project will improve and extend existing public roads, storm drainage, water and sewer utilities throughout the site. Road A and the public infrastructure contained therein will be constructed to the north boundary to be extended by future development.

6. Aesthetic features and harmonious design, and

The site is highly encumbered by topography; an onsite wetland, stream, and their associated buffers; and a 100-foot wide easement to PSE for future electrical transmission towers. The site plan layout, grading, and storm drainage systems have all been carefully and thoughtfully designed to accommodate the restrictions of and to limit impacts to these existing encumbrances.

The designated park and usable recreation spaces have been designed to occupy the entire PSE easement area that bisects the site. This provides a contiguous and centralized common area that will be landscaped with trees, lawn, and other plantings to fit both active and passive uses by the community. The lower portions of the central park area are contiguous with the retained and enhanced wetland and stream buffer area, providing a transition to the natural areas preserved on the site.

The site grading has been designed to the extent practical to maintain grades that make the landscape of the open spaces—park and natural—visible and accessible and at a residential scale to be enjoyed by the surrounding residences.

The housing product anticipated for this project includes attractive design details and features that are consistent with typical northwest housing styles. Additionally, the site and landscaping design integrate the natural environment with the streetscape and building styles.

7. Energy-efficient site design and/or building features; and

The housing products anticipated for this project will be designed to current and applicable Washington State Energy Code standards. These standards include inherent energy efficiencies and

provide incentives for such things as efficient appliances. The extensive open space areas—including areas of native tree retention and critical area resources—also provide environmental benefits. The reduced pavement area proposed with the modified local access and collector road standard is an effective LID method that also provides for shorter road lengths and pedestrian crossing distances.

C. The PRD will be served by adequate public facilities including streets, fire protection, water, storm water management, and sanitary sewer for acceptable waste controls, as demonstrated by the submittal and review of plans for such facilities as described under MMC 18.84.060; and

The project proposes to extend and improve existing public roadway, storm drainage, and utilities at Chain Lake Road to serve the project. These public infrastructure improvements will include a temporary terminus at the north boundary for future connection/extension by others.

D. The proposed landscaping within the PRD's perimeter is superior to that normally required by the city; and

The project site includes landscaped and preserved natural forest areas that create a contiguous green space throughout the central site. The preserved natural area extends to the east perimeter of the property.

E. At least one major circulation point is functionally connected to a public right-of-way; and

The project will be served by extension of a public collector road from an improved portion of Chain Lake Road. This road will have sidewalks each side that will connect to a new multi-use trail system being planned by the City. Each of the onsite roadways have sidewalks each side that traverse the large central open space within the community.

F. The open space within the PRD is integrated into the design of the project rather than an isolated element; and

The site is highly encumbered by topography; an onsite wetland, stream, and their associated buffers; and a 100-foot wide easement to PSE for future electrical transmission towers. The site plan layout, grading, and storm drainage systems have all been carefully and thoughtfully designed to accommodate the restrictions of and to limit impacts to these existing encumbrances.

The designated park and usable recreation spaces have been designed to occupy the entire PSE easement area that bisects the site. This provides a contiguous and centralized common area that will be landscaped with trees, lawn, and other plantings to fit both active and passive uses by the community. The lower portions of the central park area are contiguous with the retained and enhanced wetland and stream buffer area, providing a transition to the natural areas preserved on the site.

The site grading has been designed to the extent practical to maintain grades that make the landscape of the open spaces—park and natural—visible and accessible and at a residential scale to be enjoyed by the surrounding residences.

G. The PRD is compatible with the adjacent development; and

The project has been designed consistent with current MMC provision for an R4 zoning. The density and lot sizes conform to the "low density single-family residential" designation provided by the City's

comprehensive plan for the site and surrounding properties—including the completed adjacent Eaglemont subdivision immediately west of the site and the Easton Cove community to the east.

H. Undeveloped land adjoining the PRD may be developed in coordination with the PRD; and

The properties adjacent to the project site share the same R4 zoning. The bulk dimensions implemented by the project as a PRD are consistent with those that will be required by future development of the properties adjacent.

I. The PRD is harmonious and appropriate in design, character and appearance to the existing or intended character of development in the immediate vicinity; and

The project has been designed consistent with current MMC provision for an R4 zoning. The density and lot sizes conform to the R4, Low Density Residential zoning designation provided by the City's comprehensive plan for the site and surrounding properties—including the completed Eaglemont subdivision immediately west of the site and recently developed Easton Cove community east of the site. The properties adjacent to the project site share the same R4 zoning. The bulk dimensions implemented by the project as a PRD are consistent with those that will be required by future development of the properties adjacent.

The site is highly encumbered by topography; an onsite wetland, stream, and their associated buffers; and a 100-foot wide easement to PSE for future electrical transmission towers. The site plan layout, grading, and storm drainage systems have all been carefully and thoughtfully designed to accommodate the restrictions of and to limit impacts to these existing encumbrances.

The site grading has been designed to the extent practical to maintain grades that make the landscape of the open spaces—park and natural—visible and accessible and at a residential scale to be enjoyed by the surrounding residences.

J. Roads, streets and sidewalks, existing and proposed, comply with the standards and requirements of this chapter and the Monroe Municipal Code; and

The Garibaldi PRD includes two public local access roads (Road C and Road D) and two collector roads (Road A and Road B) that connect at intersections with an improved Chain Lake Road frontage. These roadways include standard 5-foot wide concrete sidewalks on each side that provide for continuous and convenient pedestrian accessibility. A request for a reduced road section has been made as a part of this application. This section is consistent with the allowances for flexibility in design standards provided a PRD and maintains all safety and functional standards of the City's Public Works standards. Additionally, the reduced pavement section provides an effective LID method of storm water controls consistent with current City surface water and amended zoning objectives.

K. Each phase of the PRD, as it is completed, shall contain the required parking spaces, open space, recreation facilities, landscaping, and utility area planned for that phase.

The Garibaldi PRD project is not currently anticipated for phased development. The applicant/developer reserves the right to phase the project if necessary due to market or other economic conditions. If phased, it is understood that all criteria/conditions of approval related to parking spaces, open space, recreation facilities, landscaping, and utilities must be achieved for each development phase.

Please contact me directly at (425) 285-2391 or by e-mail at matt@cphconsultants.com if you have questions or need any additional information to complete your review and approval of the preliminary plat and PRD. Your time, efforts, and consideration are appreciated. Thank you.

Sincerely,
CPH Consultants



Matthew Hough, PE
President

Enclosures: Preliminary Site Plan (reduced)
Park, Recreation, and Open Space Plan (reduced)

Cc: Ms. Melanie Davies (Westcott Homes, Inc.)
copy to file

OTOP541828
CSIT541828
TBLOCK
CNOT541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

PROJECT INFORMATION

SNOHOMISH CO. TAX PARCEL NO.	PARCEL AREA	
28073100200800	8.94 AC	389,232 SF
28073100201600	2.69 AC	117,344 SF
28073100203900	2.17 AC	94,534 SF
28073100202800	1.96 AC	85,386 SF
28073100202900	2.09 AC	90,952 SF
TOTAL SITE AREA	17.85 AC	777,448 SF

	R4 - PRD	
MINIMUM DENSITY	n/a	
MINIMUM NO. LOTS		
BASE DENSITY	4.00 DU/AC	
BASE ALLOWABLE NO. LOTS	71	
MAXIMUM (PRD) DENSITY	5.20 DU/AC	
MAXIMUM ALLOWABLE NO. LOTS	93	
PROPOSED RESIDENTIAL LOTS	**90**	
MINIMUM LOT AREA REQUIRED	n/a	
MINIMUM LOT WIDTH REQUIRED	30 FT	
MAXIMUM LOT COVERAGE ALLOWED	60 FT	
MAXIMUM BUILDING HEIGHT ALLOWED	35 FT	
FRONT YARD SETBACK	10 FT	
GARAGE SETBACK	20 FT	
SIDE YARD SETBACK	5 FT	
REAR YARD SETBACK	10 FT	
MINIMUM LOT SIZE PROPOSED	3,282 SF	
MINIMUM LOT WIDTH PROPOSED	40 FT	
AVERAGE LOT AREA PROPOSED	4,753 SF	
MAXIMUM LOT SIZE PROPOSED	9,013 SF	
RESIDENTIAL LOT MIX (MMC 18.84.080.D)	35.6%	< 4,000 SF
	36.7%	4,001 TO 5,000 SF
	27.8%	> 5,000 SF
REQUIRED PARK AND REC. OPEN SPACE:	900 SF/DU	64,252 SF
PARK AND RECREATION OPEN SPACE PROVIDED:		
TRACT 990	25,562 SF	
TRACT 993	31,332 SF	
TRACT 995	9,572 SF	
TOTAL CENTRAL PARK	66,467 SF	
TRACT 996	25,471 SF	
TOTAL PARK/RECREATION OPEN SPACE	91,938 SF	
OTHER ADDITIONAL OPEN SPACE AREAS:		
Tract 999, CRITICAL AREA OPEN SPACE	81,159 SF	
Tract 998, LANDSCAPE COMMON AREA	1,935 SF	
Tract 997, LANDSCAPE COMMON AREA	7,810 SF	
Tract 989, LANDSCAPE COMMON AREA	4,269 SF	
TOTAL OTHER OPEN SPACE AREAS	95,173 SF	
TOTAL PARK/RECREATION OPEN SPACE	187,111 SF	4.30 AC

UTILITY PURVEYORS AND PUBLIC SERVICE PROVIDERS

WATER	CITY OF MONROE
SANITARY SEWER	CITY OF MONROE
STORM DRAINAGE	CITY OF MONROE
FIRE DISTRICT	FIRE DISTRICT NO. 7
SCHOOL DISTRICT	MONROE SCHOOL DIST. NO. 103
POWER (ELECTRICITY)	PUGET SOUND ENERGY
NATURAL GAS	PUGET SOUND ENERGY

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

SURVEY DATA

EXISTING BOUNDARY, TOPOGRAPHIC, AND PLANIMETRIC INFORMATION SHOWN ON THIS PLAN AND OTHERS IN THIS SET WERE USED AS A BASIS FOR DESIGN AND REPRESENT FIELD SURVEY DATA AND MAPPING PREPARED BY MEAD GILMAN LAND SURVEYORS (JOB NO. 13120), AS PROVIDED BY THE PROJECT OWNER, AND DOES NOT REPRESENT WORK BY CPH CONSULTANT (SEE COVER SHEET FOR LEGAL DESCRIPTION).

RIGHT-OF-WAY ALIGNMENT DATA

LINE TABLE			LINE TABLE			CURVE TABLE			
LINE #	LENGTH	DIRECTION	LINE #	LENGTH	DIRECTION	CURVE #	Δ	RADIUS	LENGTH
L1	93.15'	N59°31'14"W	L10	43.26'	N11°07'50"W	C1	N73°57'52"W	165.00'	83.19'
L2	32.44'	N88°24'30"W	L11	219.31'	S89°14'07"E	C2	S14°23'33"W	100.00'	87.37'
L3	133.61'	S39°25'15"W	L12	130.26'	N20°10'29"E	C3	N87°54'28"W	50.00'	91.93'
L4	54.09'	N35°14'12"W	L13	40.56'	N25°38'17"E	C4	N22°56'10"W	165.00'	70.85'
L5	160.25'	N10°38'08"W	L14	111.17'	N47°28'51"E	C5	N4°57'46"W	165.00'	32.67'
L6	660.35'	N0°42'36"E	L15	176.96'	N69°49'31"W	C6	N4°57'46"W	165.00'	32.67'
L7	194.01'	N0°10'56"E	L16	55.00'	N62°21'41"W	C7	N5°12'37"W	51.00'	10.54'
L8	140.01'	N10°38'08"W	L17	292.99'	N89°49'04"W	C8	N55°28'11"E	86.00'	105.95'
L9	219.45'	N0°42'36"E				C9	N22°54'23"E	474.00'	45.20'
						C10	N36°33'34"E	61.00'	23.25'

NO.	DATE	REVISION	BY	CK.
1	3/05/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

MATTHEW J. HOUGH — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER — 03/05/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PRELIMINARY PLAT PLAN

SNOHOMISH COUNTY, WA

CITY OF MONROE

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11301-8 NE 120th Street
Kirkland, WA 98034 • (425) 285-2280
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

PROJECT NO.
0054-18-028

DRAWING
P2.00

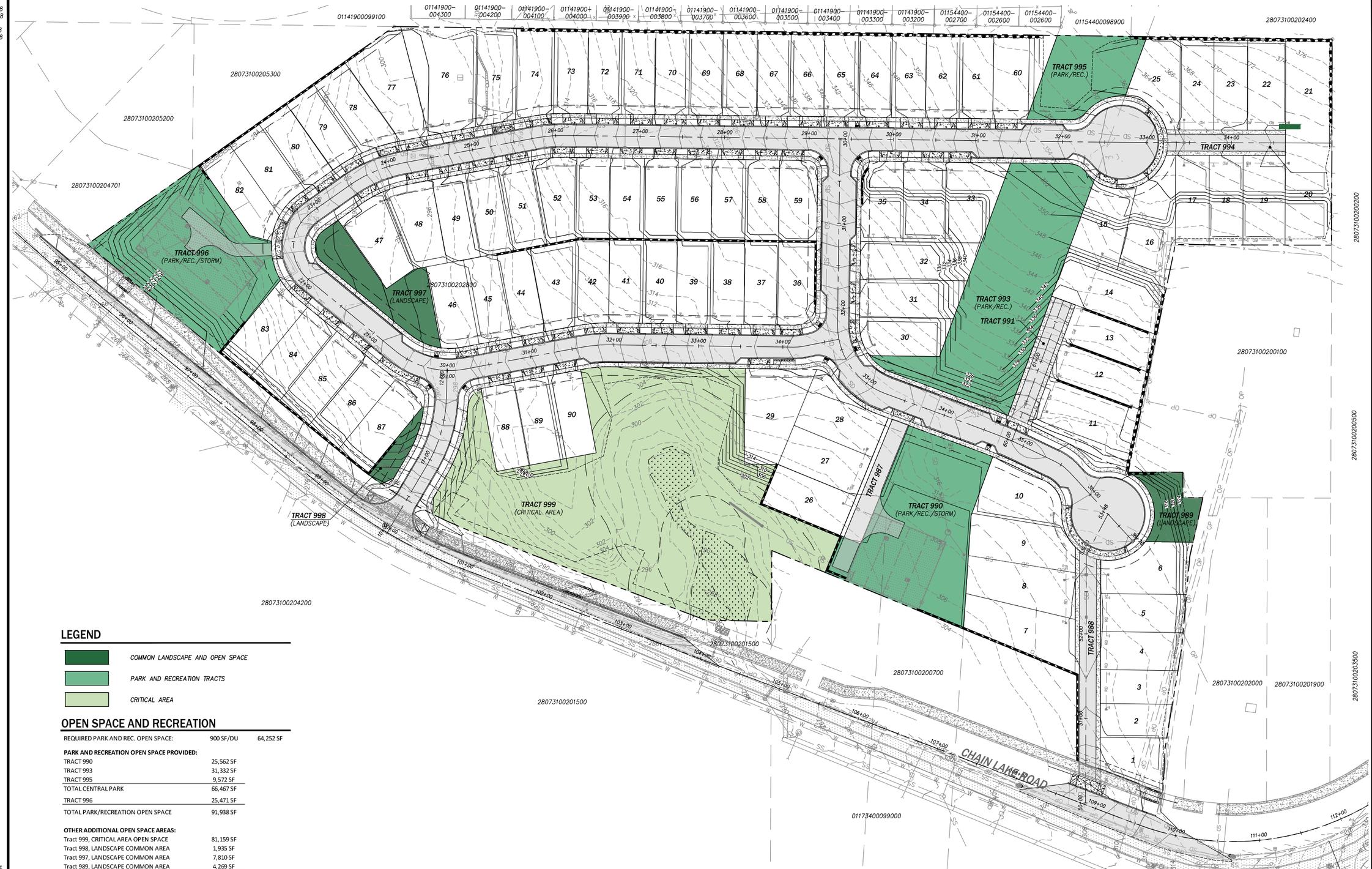
SHEET 4 OF 25

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3/6/2021 11:24 PM MATT HOUGH

OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



LEGEND

- COMMON LANDSCAPE AND OPEN SPACE
- PARK AND RECREATION TRACTS
- CRITICAL AREA

OPEN SPACE AND RECREATION

REQUIRED PARK AND REC. OPEN SPACE:	900 SF/DU	64,252 SF
PARK AND RECREATION OPEN SPACE PROVIDED:		
TRACT 990	25,562 SF	
TRACT 993	31,332 SF	
TRACT 995	9,572 SF	
TOTAL CENTRAL PARK	66,467 SF	
TRACT 996	25,471 SF	
TOTAL PARK/RECREATION OPEN SPACE	91,938 SF	
OTHER ADDITIONAL OPEN SPACE AREAS:		
Tract 999, CRITICAL AREA OPEN SPACE	81,159 SF	
Tract 998, LANDSCAPE COMMON AREA	1,935 SF	
Tract 997, LANDSCAPE COMMON AREA	7,810 SF	
Tract 989, LANDSCAPE COMMON AREA	4,269 SF	
TOTAL OTHER OPEN SPACE AREAS	95,173 SF	
TOTAL PARK/RECREATION OPEN SPACE	187,111 SF	4.30 AC

NOTE: SEE LANDSCAPE PLANS FOR PARK AND RECREATION AREA PLANTING AND AMENITY DETAILS.

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

0 50 100
PLAN IN FEET

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NO.	DATE	REVISION	BY	CK.
1	3/05/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

MATTHEW J. HIGGINS — 22400 — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 03/05/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PARK, RECREATION AND OPEN SPACE PLAN

SNOHOMISH COUNTY, WA

CITY OF MONROE

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
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Landscape Architecture • Land Use Consulting
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Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

PROJECT NO.
0054-18-028

DRAWING
P7.00

SHEET 14 OF 25

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3/7/2021 12:47 AM MATT HOUGH

EXHIBIT 7

City of Monroe
806 West Main Street, Monroe, WA 98272
Phone (360) 794-7400 Fax (360) 794-4007
www.monroewa.gov

NOTICE OF LAND USE APPLICATION

NOTICE IS HEREBY GIVEN that the City of Monroe has received an application for a Preliminary Plat and Planned Residential Development as described below:

PROJECT NAME: Garibaldi Preliminary Plat/Planned Residential Development

PROJECT FILE#: PLPRD2018-02

APPLICANT/OWNER: Garibaldi Lake, LLC, 1010 Market Street, Kirkland, WA 98033

PROJECT LOCATION: The site is located at 13624 and 13424 Chain Lake Road, Monroe, Washington, 98272. Snohomish County Tax Parcel Numbers: 28073100200800, 28073100201600, 28073100203900.

PROJECT DESCRIPTION: The applicant is requesting preliminary plat and planned residential development approval for a 61-lot subdivision on approximately 13.8 acres in the Residential 4 Dwellings Per Acre (R4) zoning district with associated grading, drainage improvements, landscaping, and street frontage improvements. There is a Category III wetland and unclassified stream onsite. The existing single-family residences and outbuildings will be demolished. The proposed development will take access off of Chain Lake Road.

PERMITS/APPROVALS REQUIRED: Preliminary Subdivision Approval, Preliminary Planned Residential Development Approval, Environmental Review, Grading/Engineering Permits, and any State and Federal Permits if applicable.

STUDIES REQUIRED: Traffic Study, Drainage Report, Environmental Checklist, Geotechnical Report, Critical Areas Report.

APPLICATION PROCESS: A preliminary plat/PRD application is a public hearing review process per City of Monroe Municipal Code (MMC) Chapter(s) 18.84.110 (D) and 21.20.050(F). This project requires a public hearing and decision before the Hearing Examiner.

APPLICATION DATE: December 19, 2018

NOTICE OF COMPLETE APPLICATION: January 7, 2019

DATE OF NOTICE OF APPLICATION: January 16, 2019

PUBLIC COMMENT PROCEDURE: Submit written comments on or before **5 p.m., January 31, 2019.** Comments should address completeness of the application, quality or quantity of information presented, and the project's conformance to applicable plans or code. This will be the only opportunity to comment on the impacts of the proposed plat.

STAFF CONTACT: Anita Marrero, Senior Planner @ (360) 863-4513 or amarrero@monroewa.gov

All documents are available for review Monday-Friday, 8:00-5:00 p.m., excluding holidays, at Monroe City Hall, 806 West Main St Monroe, WA 98272 and online at:
www.monroewa.gov/799/Garibaldi-Preliminary-Plat-PRD
A decision on the application will be made within ninety (90) days of the date of the letter of completeness.

EXHIBIT 7-A

Everett Daily Herald

Affidavit of Publication

State of Washington }
County of Snohomish } ss

Dicy Sheppard being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Everett Daily Herald a daily newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a daily newspaper in Snohomish County, Washington and is and always has been printed in whole or part in the Everett Daily Herald and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Snohomish County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of EDH841412 PLPRD2018-02 as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 1 issue(s), such publication commencing on 01/16/2019 and ending on 01/16/2019 and that said newspaper was regularly distributed to its subscribers during all of said period.

The amount of the fee for such publication is $65.25.

Dicy Sheppard

Subscribed and sworn before me on this 16 day of January, 2019.

Aubrey Knapp

Notary Public in and for the State of Washington.

City Of Monroe | 14103247
LEIGH ANNE BARR

AUBREY KNAPP
Notary Public
State of Washington
My Commission Expires
July 30, 2022

Classified Proof

CITY OF MONROE, WASHINGTON
NOTICE OF LAND USE APPLICATION

NOTICE is hereby given that the City of Monroe has received an application for a Preliminary Plat and Planned Residential Development as described below: PROJECT NAME: Garibaldi Preliminary Plat/Planned Residential Development PROJECT FILE#: PLPRD2018-02 APPLICANT/OWNER: Garibaldi Lake, LLC, 1010 Market Street, Kirkland, WA 98033 PROJECT LOCATION: The site is located at 13624 and 13424 Chain Lake Road, Monroe, Washington, 98272. Snohomish County ~~Tax Parcel~~ Numbers: 28073100200800, 28073100201600, 28073100203900. PROJECT DESCRIPTION: The applicant is requesting preliminary plat and planned residential development approval for a 61-lot subdivision on approximately 13.8 acres in the Residential 4 Dwellings Per Acre (R4) zoning district with associated grading, drainage improvements, landscaping, and street frontage improvements. There is a Category III wetland and unclassified stream onsite. The existing single-family residences and outbuildings will be demolished. The proposed development will take access off of Chain Lake Road. PERMITS/APPROVALS REQUIRED: Preliminary Subdivision Approval, Preliminary Planned Residential Development Approval, Environmental Review, Grading/Engineering Permits, and any State and Federal Permits if applicable. STUDIES REQUIRED: Traffic Study, Drainage Report, Environmental Checklist, Geotechnical Report, Critical Areas Report. APPLICATION PROCESS: A preliminary plat/PRD application is a public hearing review process per City of Monroe Municipal Code (MMC) Chapter(s) 18.84.110 (D) and 21.20.050(F). This project requires a public hearing and decision before the Hearing Examiner. APPLICATION DATE: December 19, 2018 NOTICE OF COMPLETE APPLICATION: January 7, 2019 DATE OF NOTICE OF APPLICATION: January 16, 2019 PUBLIC COMMENT PROCEDURE: Submit written comments on or before 5 p.m., January 31, 2019. Comments should address completeness of the application, quality or quantity of information presented, and the project's conformance to applicable plans or code. This will be the only opportunity to comment on the impacts of the proposed plat. STAFF CONTACT: Anita Marrero, Senior Planner @ (360) 863-4513 or amarrero@monroewa.gov. All documents are available for review Monday-Friday, 8:00-5:00 p.m., excluding holidays, at Monroe City Hall, 806 West Main St Monroe, WA 98272 and online at www.monroewa.gov. A decision on the application will be made within ninety (90) days of the date of the letter of completeness.

Published: January 16, 2019. EDH841412

EXHIBIT 7-B

AFFIDAVIT OF POSTING
NOTICE OF LAND USE APPLICATION

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake RD Monroe, WA, 98272 & 13424 Chain Lake RD Monroe, WA 98272
Project location

Garibaldi (PLPRD2018-02)
Application Name and File Number

I, Aaron Ankerson being first duly sworn on oath, depose and say: That I am a citizen of the United States of America; That I am competent to be witness herein; That on the **16th** day of **January, 2019**, I posted (2) **Notice of Application for the Garibaldi Preliminary Plat and PRD** on site; and on the correct date of posting of said notice, to wit:

13624 &13424 Chain Lake RD Monroe, WA 98272
Location of Notice

Signed

Subscribed and sworn to me this 16th day of Jan., 2019

NOTARY SEAL

KIM M SHAW NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 06-03-20

Kim M. Shaw
NOTARY PUBLIC in and for the State of Washington, residing at:

Snohomish County

Printed Name: Kim M. Shaw

My commission expires: 6/3/2020

EXHIBIT 7-C

AFFIDAVIT OF MAILING
NOTICE OF LAND USE APPLICATION

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

Garibaldi Preliminary Plat/PRD #PLPRD2018-02
Application Name & File #

Garibaldi Lake, LLC
Applicant

I, **Kim Shaw,** being first duly sworn on oath depose and say that on the **15th** day of **January, 2019,** made application with Click 2 Mail to mail on **January 16th, 2019,** a copy with prepaid postage of the **Notice of Land Use Application for the Preliminary Plat/PRD of Garibaldi.** Attached is a list of names and addresses to whom this information was mailed.

Kim Shaw
Signed

Subscribed and sworn to me this 16th day of January, 2019

NOTARY SEAL

VICKI L. THAYER NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 5-09-20

Vicki L Thayer
NOTARY PUBLIC in and for the State of Washington, residing at:

Snohomish County

Printed Name: Vicki L. Thayer

My commission expires: May 9, 2020

OWNER NAME	ADDRESS	CITY	STATE	ZIP
ALTAYAR MOHANNAD	19827 137TH ST SE	MONROE	WA	98272
BACON ROBERT B & JANET B TRUST	14311 KENWANDA DR	SNOHOMISH	WA	98296
BALLINGER COMMERCIAL PROPERTIES LLC	PO BOX 1	MONROE	WA	98272
BALOCH TASNEEM	13643 198TH AVE SE	MONROE	WA	98272
BECKLEY ALAN M & KARA N	13811 CHAIN LAKE RD	MONROE	WA	98272
BEWICK KENNETH ALLEN & PAULA ANN	13633 198TH AVE SE	MONROE	WA	98272
BHURGRI MASIULLAH & AYESHA	13547 199TH AVE SE	MONROE	WA	98272
BRIDWELL NELSON & DARBY-BRIDWELL ROBIN	19869 136TH PL SE	MONROE	WA	98272
BRODY COURTNEY H/MOSHIER MARIANNE T	13539 204TH DR SE	MONROE	WA	98272
BRUNSMAN WILLIAM A	19841 136TH PL SE	MONROE	WA	98272
BUNGE JOHN L & CAROL Y FAMILY TRUST	9505 NE 13TH ST	BELLEVUE	WA	98004
CALLIER MICHAEL & HARRIET	19890 135TH ST SE	MONROE	WA	98272
CALVERT RYAN L & JENNIFER	13618 199TH AVE SE	MONROE	WA	98272
CAVALCANTE FABIO V & JESSICA M	19883 137TH ST SE	MONROE	WA	98272
CHAIN LAKE DUPLEX LLC	13252 NE 47TH ST	BELLEVUE	WA	98005
CHRISTIAN GUADALUPE MORALES & CHRISTOPHE	20341 135TH PL SE	MONROE	WA	98272
CHRISTOPHER STEPHEN T & MELISSIA B	13628 199TH AVE SE	MONROE	WA	98272
CITY OF MONROE	806 WEST MAIN ST	MONROE	WA	98272
CLARK SHELDON & MARCELA	19855 137TH ST SE	MONROE	WA	98272
CLOTHIER MICHAEL & SHANNA	27419 118TH ST SE	MONROE	WA	98272-9506
COLLINS CEDRIC V	13670 199TH AVE SE	MONROE	WA	98272
DAHLGREN JOHN & KATHLEEN	19813 135TH ST SE	MONROE	WA	98272
DEGTYAREV GEORGIY & SVETLANA	19844 135TH ST SE	MONROE	WA	98272
DENTON WARREN K & ZAIDAH	19841 137TH ST SE	MONROE	WA	98272
DOOMRA SILVIA/WATTS SAGAR	20306 135TH PL SE	MONROE	WA	98272
EAGLEMONT HOA	16531 13TH AE W #A107	LYNNWOOD	WA	98037
EAGLEMONT HOMEOWNER'S ASSOCIATION	524 SECOND AVE STE 500	SEATTLE	WA	98104
EASTON COVE HOMEOWNERS ASSOCIATION	3535 FACTORIA BLVD SE STE 110	BELLEVUE	WA	98006
ECHELBARGER ERIC & ANKLEY CRYSTAL	13679 199TH AVE SE	MONROE	WA	98272
ELMUGHRABI AMER O & ABULBASAL FARAH	19797 135TH ST SE	MONROE	WA	98272
ENGELS JOHN A & JANELL	13701 199TH AVE SE	MONROE	WA	98272
FONG CATHERINE	PO BOX 365	ISSAQUAH	WA	98027
FRICKE THOMAS J & KATHRYN	13579 199TH AVE SE	MONROE	WA	98272

GALICIA URIEL	13860 CHAIN LAKE RD	MONROE	WA	98272-7700
GARIBALDI LAKE LLC	1010 MARKET ST	KIRKLAND	WA	98033
GARIGALDI LAKE LLC	1010 MARKET ST	KIRKLAND	WA	98033
GILLON JESSICA R & ERIC R	13230 CHAIN LAKE RD	MONROE	WA	98272-9709
GRANT BRIAN & LINDA	13304 CHAIN LK RD	MONROE	WA	98272
GRIFFIN RICHARD DALE	13305 CHAIN LAKE RD	MONROE	WA	98272
GRUMMONS JEFFREY A & DEANA M	19798 137TH ST SE	MONROE	WA	98272
GUTHA THULASIRAM & GAYATHRI	20312 135TH PL SE	MONROE	WA	98272
HANKINS KEVIN MATTHEW & SHARLENE M PAYNE	13593 199TH AVE SE	MONROE	WA	98272
HARP ROBERT K & DENISE	19030 LENTON PL SE #184	MONROE	WA	98272
HAZELWOOD PATRICK T & MONICA	19816 135TH ST SE	MONROE	WA	98272
HELMAN CHARLES B & GRETCHEN L	13671 198TH AVE SE	MONROE	WA	98272
HELMAN JEFFERY & DEBORAH	19862 135TH ST SE	MONROE	WA	98272
HENDRICKS RANDEN & PAULA	13205 CHAIN LAKE RD	MONROE	WA	98272-9709
HENKE DAWN V & RYAN M	13623 198TH AVE SE	MONROE	WA	98272
HILL FAMILY TRUST	13424 205TH AVE SE	MONROE	WA	98272-7769
IENG KELVIN/TRUONG BRIANNA	20340 135TH PL SE	MONROE	WA	98272
JAGNE SULAYMAN	13768 199TH AVE SE	MONROE	WA	98272
JONES PAUL & COLLETTE TRUST	13617 199TH AVE SE	MONROE	WA	98272
JONES TERRY & CONSTANCE	13605 199TH AVE SE	MONROE	WA	98272
JYOTI RISHI & THIRTHA RASHMI	13796 199TH AVE SE	MONROE	WA	98272
KAMOJWALA V/VADIYALA SHIRISHA	13483 204TH DR SE	MONROE	WA	98272
KANSARA MEHUL & NISHA	9979 242ND WAY NE	REDMOND	WA	98053
KING JEREMY J & STEFANI M	19871 137TH ST SE	MONROE	WA	98272
KORSLUND JOSEPH M	13414 CHAIN LAKE RD	MONROE	WA	98272-7703
KORSLUND LARRY J	13410 CHAIN LAKE RD	MONROE	WA	98272-7703
KORSLUND LARRY JO & VERNA L	13410 CHAIN LAKE RD	MONROE	WA	98272-7703
KUMAR PRASHANT V & ANJANI	13669 199TH AVE SE	MONROE	WA	98272
LINTON JAMISON G	11801 97TH LN NE B051	KIRKLAND	WA	98034
LONG JEFFERY & MARVIS	19842 136TH PL SE	MONROE	WA	98272
LOVATT JAMES & DEANNA	19811 136TH PL SE	MONROE	WA	98272
LUONG LIEM T	13659 198TH AVE SE	MONROE	WA	98272
LUPASCU SIMION & LUNGU DOINA	13647 199TH AVE SE	MONROE	WA	98272
MACCAUL ROBERT & JOANN	19852 137TH ST SE	MONROE	WA	98272

MACDONALD STEVEN LAWRENCE & HSIAOFANG	13565 199TH AVE SE	MONROE	WA	98272
MADDEX TIMOTHY E & CHERYL A	13316 CHAIN LAKE RD	MONROE	WA	98272-7703
MAINVUE WA LLC	1110 112TH AVE NE STE 202	BELLEVUE	WA	98004
MAMIYA KATSUMI & HIROKA	1370 116TH AVE NE STE 201	BELLEVUE	WA	98004
MANZIONE LISA M	13613 198TH AVE SE	MONROE	WA	98272
MARCELLIN MICHELLE A & NEVILLE F JR	19838 137TH ST SE	MONROE	WA	98272
MELILLO DOMINIC & MIRTHA TRUST	13217 CHAIN LAKE RD	MONROE	WA	98272-9709
MIX WILLIAM K & CRISTIN L	14911 CHAIN LAKE RD M321	MONROE	WA	98272
NASIN KHALID	19876 135TH ST SE	MONROE	WA	98272
NEARY BRIAN L	19817 137TH ST SE	MONROE	WA	98272
NGAN VYNA/CHAY JOHN	13659 199TH AVE SE	MONROE	WA	98272
NISSEN JACKIE & JIM	13876 CHAIN LAKE RD	MONROE	WA	98272-7700
NORDLUND PAUL B & KRISTIN D	13724 199TH AVE SE	MONROE	WA	98272
OSBORN FAMILY LIVING TRUST	13773 CHAIN LAKE RD	MONROE	WA	98272-8760
OTTEY HERBERT & GRACE	19824 137TH ST SE	MONROE	WA	98272
OWNER NAME	ADDRESS	CITY	STATE	ZIP
PAL ANESH & PREETIKA	13627 199TH AVE SE	MONROE	WA	98272
PETTY DAVID & LAURIE TRUST	13656 199TH AVE SE	MONROE	WA	98272
PHILLIPS TERESA R	13773 199TH AVE SE	MONROE	WA	98272-8509
PRASAD SWASTHA & RANJANA NEELAM	19855 136TH PL SE	MONROE	WA	98272
PULTE HOMES OF WASHINGTON INC	3535 FACTORIA BLVD SE STE 600	BELLEVUE	WA	98006
RABADAN EUTIQUIO TERAN	13868 CHAIN LAKE RD	MONROE	WA	98272-7700
ROE DAWN LEE	13471 204TH DR SE	MONROE	WA	98272
ROMANYUK ANITA & ALEXANDER L	13232 CHAIN LAKE RD	MONROE	WA	98272-9709
RYU SUZIE Y & SHI D	13612 199TH AVE SE	MONROE	WA	98272
SALMONSEN DANIEL M	13624 199TH AVE SE	MONROE	WA	98272
SAMPAT SUMIT KISHANSINH & BHAVANA SUMIT	19868 137TH ST SE	MONROE	WA	98272
SCHENCK GARY & JANA	13689 199TH AVE SE	MONROE	WA	98272
SEATTLE ASBESTOS ENVIRONMENTAL LLC	17523 160TH ST SE	MONROE	WA	98272
SEVERSON DEBORAH & DALE	19835 135TH ST SE	MONROE	WA	98272
SHAW JEFFREY	19885 136TH PL SE	MONROE	WA	98272
SIMPSON LISA	13746 199TH AVE SE	MONROE	WA	98272
SINCLAIR HEIGHTS HOA	16030 JUANITA-WOODINVILLE WAY NE	BOTHELL	WA	98011
STUTZ JON JUSTUS & BONNIE JEAN TRUST	13422 205TH AVE SE	MONROE	WA	98272-7769

SUSCHIK MICHAEL & TAMARA	21819 60TH AVE SE	WOODINVILLE	WA	98072
TAUNT DAYLON D & PENMAN JAMES D	19812 137TH ST SE	MONROE	WA	98272
THOMFORDE GARY & MARJORIE	13872 CHAIN LAKE RD	MONROE	WA	98272-7700
UDOM KHAM	20323 135TH PL SE	MONROE	WA	98272
UNKNOWN	UNKNOWN	UNKNOWN	WA	
UPTON KEITH P & WEBER CHRISTOPHER AARON	13525 204TH DR SE	MONROE	WA	98272
VALERA VAZQUEZ GILBERTO/JUAN/LUIS	13819 CHAIN LAKE RD	MONROE	WA	98272
WALTERS AMY S	3115 N 9TH ST	TACOMA	WA	98406
WESTFAHL JEFFREY J & CORINA	14751 N KELSEY ST STE 105-516	MONROE	WA	98272
WEYHRAUCH CHAD W & BRENDA	14308 BROADWAY AVE	SNOHOMISH	WA	98296-7005
WOODS CREEK DEVELOPMENT CORPORATION	14670 NE 8TH ST #200	BELLEVUE	WA	98004
ZAKARIYA BOUTAYNA/BENNIS ABDELMAJID	18100 NE 95TH ST APT LL2057	REDMOND	WA	98052
ZHANG XIANRONG	19798 135TH ST SE	MONROE	WA	98272
ZOBELL SHELDON J & ELLEN SHERRI	13704 199TH AVE SE	MONROE	WA	98272

Click 2 Mail

Order #104004201

Order Date: January 15, 2019

Account: CityofMonroe

Order Total: $97.63

Billing Address

Finance Department
City of Monroe
806 W Main St
Monroe WA 98272-2125
United States

Payment Method

User Credit

Complete In progress Attention

Job ID: 3623707 *Requested Fulfillment Date: 1/16/2019*

Product Information	Actual Fulfillment Date	Quantity	Subtotal	Status
Postcard - 5 x 8 - SpaceSaver Format Product SKU: PC41-P *Product Type: Postcard 5 X 8* *Paper Type: White Matte* *Print Color: Full Color* *Print Options: Printing Both Sides* *Mail Class: First Class* *Production Time: Next Day* *Base Document Name: Garibaldi NOA* *Job Address List Name: Garibaldi Mailing List 01152019* Production Cost for 113 Pieces:$49.72 First Class Automation Letter Postage for 113 Pieces: $47.91 Postage for 0 Pieces: $0.00 Postage for 0 Pieces: $0.00		113	$97.63	
			Order Sub Total:	$97.63
			Invoice Subtotal:	$97.63
			Total Invoice:	$97.63

EXHIBIT 7-D

From:	Kim Shaw
To:	Kim Shaw
Cc:	Kim Shaw; Anita Marrero
Bcc:	"separegister@ecy.wa.gov"; "pspirito@sno-isle.org"; "lanthony@sno-isle.org"; "Justin.fontes@ftr.com"; "david.matulich@pse.com"; "john_warrick@cable.comcast.com"; "crenderlein@snopud.com"; "Kate.Tourtellot@commtrans.org"; "Neilwheeler@comcast.net"; "Eileen.lefebvre@providence.org"; "piplicd@monroe.wednet.edu"; "Gretchen.Kaehler@DAHP.wa.gov"; "sharon.swan@snoco.org"; "Diane.Rolph@co.snohomish.wa.us"; "mfitzgerald@snofire7.org"; "k.kerwin@snoco.org"; "SEPA@pscleanair.org"; "stevev@pscleanair.org"; "eip@parks.wa.gov"; "sposner@utc.wa.gov"; "kmclain@agr.wa.gov"; "ike.nwankwo@commerce.wa.gov"; "reviewteam@commerce.wa.gov"; "sepadesk@dfw.wa.gov"; "efheinitz@doc1.wa.gov"; "sepacenter@dnr.wa.gov"; "ramin.pazooki@wsdot.wa.gov"; "randy.kline@parks.wa.gov"; "somers.elaine@epa.gov"; "epa-seattle@epa.gov"; "Stan.Allison@faa.gov"; "Karen.Wood-McGuiness@fema.dhs.gov"; "kjoseph@sauk-suiattle.com"; "njoseph@sauk-suiattle.com"; "jjoseph@sauk-suiattle.com"; "ryoung@tulaliptribes-nsn.gov"; "klyste@stillaguamish.com"; "pstevenson@stillaguamish.com"; "newstips@heraldnet.com"; "mmuscari@esassoc.com"; "info@PPTValley.org"; "tom.laufmann@sno.wednet.edu"; "lpelly@tu.org"; "rooseveltwater@frontier.com"; "staff@highlandwaterdistrict.com"; "bewood@snopud.com"; "faye.ryan@pse.com"; "dan.o.olson@williams.com"; "shannon.fleming@snoco.org"; "zlamebull@tulaliptribes-nsn.gov"; "wrightp@wsdot.wa.gov"; "mrobenland@doc1.wa.gov"; "mannixj@monroe.wednet.edu"; "hansenh@monroe.wednet.edu"; "JPrichard@republicservices.com"; "rodrijr@dshs.wa.gov"; "EHquestions@snohd.org"
Subject:	Notice of Application for Garibaldi Preliminary Plat/PRD - File #PLPRD2018-02
Date:	Thursday, January 17, 2019 8:47:00 AM
Attachments:	NOA.pdf

Good morning!

Please see the attached Notice of Application for City of Monroe File #PLPRD2018-02 – Preliminary Plat and Planned Residential Development (PRD) for Garibaldi. For questions regarding this project, please contact Anita Marrero, Senior Planner, at (360) 863-4513 or amarrero@monroewa.gov.

Project information is also available on the city's web site at www.monroewa.gov/799/Garbaldi-Preliminary-Plat-PRD.
Thank you,
Kim

Kim Shaw, CPT | Land Use Permit Supervisor
806 West Main Street | Monroe, WA 98272
360-863-4532 | kshaw@monroewa.gov

NOTE: This email is considered a public record and may be subject to public disclosure.

EXHIBIT 8

City of Monroe
806 West Main Street, Monroe, WA 98272
Phone (360) 794-7400 Fax (360) 794-4007
www.monroewa.gov

NOTICE OF LAND USE APPLICATION

NOTICE IS HEREBY GIVEN that the City of Monroe has received an application for a Preliminary Plat and Planned Residential Development as described below:

PROJECT NAME: Garibaldi Preliminary Plat/Planned Residential Development

PROJECT FILE#: PLPRD2018-02

APPLICANT/OWNER: Garibaldi Lake, LLC, 1010 Market Street, Kirkland, WA 98033

PROJECT LOCATION: The site is located at 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, Washington, 98272. Snohomish County Tax Parcel Numbers: 28073100200800, 28073100201600, 28073100203900, 28073100202800, 28073100202900.

PROJECT DESCRIPTION: This application is being re-noticed due to the fact that the scope of the project has changed significantly since the original application date. The applicant is requesting preliminary plat and planned residential development approval for a 90-lot subdivision on approximately 17.85 acres in the Residential 4 Dwellings Per Acre (R4) zoning district with associated grading, drainage improvements, pedestrian facilities, landscaping, and street frontage improvements. There is a Category III wetland and unclassified stream onsite. The existing single-family residences and outbuildings will be demolished. The proposed development will take access off of Chain Lake Road.

PERMITS/APPROVALS REQUIRED: Preliminary Subdivision Approval, Preliminary Planned Residential Development Approval, Environmental Review, Grading/Engineering Permits, and any State and Federal Permits if applicable.

STUDIES REQUIRED: Traffic Study, Drainage Report, Environmental Checklist, Geotechnical Report, Critical Areas Report.

APPLICATION PROCESS: A preliminary plat/PRD application is a public hearing review process per City of Monroe Municipal Code (MMC) Chapter(s) 18.84.110 (D) and 21.20.050(F). The preliminary plat and PRD require a public hearing before the Hearing Examiner and a recommendation to the City Council. The public hearing for this project will be noticed separately.

APPLICATION DATE: December 19, 2018

NOTICE OF COMPLETE APPLICATION: January 7, 2019

RESUBMITTAL APPLICATION DATE: March 10, 2021

DATE OF NOTICE OF APPLICATION: April 7, 2021

PUBLIC COMMENT PROCEDURE: Submit written comments on or before **5 p.m., April 21, 2021.** Comments should address completeness of the application, quality or quantity of information presented, and the project's conformance to applicable plans or code. This will be the only opportunity to comment on the impacts of the proposed plat.

STAFF CONTACT: Anita Marrero, Senior Planner @ (360) 863-4513 or amarrero@monroewa.gov

As Monroe City Hall is closed to the public, documents are available for review online at www.monroewa.gov/799/Garibaldi-Preliminary-Plat-PRD. If you would like copies of any documents, please email the Permit Division at landuse@monroewa.gov. Copies are at cost.

EXHIBIT 8-A

Everett Daily Herald

Affidavit of Publication

State of Washington }
County of Snohomish } ss

Dicy Sheppard being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Everett Daily Herald a daily newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a daily newspaper in Snohomish County, Washington and is and always has been printed in whole or part in the Everett Daily Herald and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Snohomish County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of EDH923959 PLPRD2018-02 as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 1 issue(s), such publication commencing on 04/07/2021 and ending on 04/07/2021 and that said newspaper was regularly distributed to its subscribers during all of said period.

The amount of the fee for such publication is $76.50.

Dicy Sheppard

Subscribed and sworn before me on this 7th day of April, 2021.

Linda Phillips
Notary Public
State of Washington
My Appointment Expires 08/29/2021

Linda Phillips

Notary Public in and for the State of Washington.

City Of Monroe | 14103247
LEIGH ANNE BARR

Classified Proof

CITY OF MONROE, WASHINGTON
NOTICE OF LAND USE APPLICATION

NOTICE is hereby given that the City of Monroe has received an application for a Preliminary Plat and Planned Residential Development as described below: PROJECT NAME: Garibaldi Preliminary Plat/Planned Residential Development PROJECT FILE#: PLPRD2018-02 APPLICANT/OWNER: Garibaldi Lake, LLC, 1010 Market Street, Kirkland, WA 98033 PROJECT LOCATION: The site is located at 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, WA, 98272. Snohomish County Tax Parcel Numbers: 28073100200800, 28073100201600, 28073100203900, 28073100202800, 28073100202900. PROJECT DESCRIPTION: This application is being re-noticed due to the fact that the scope of the project has changed significantly ~~since the~~ original application date. The applicant is requesting preliminary plat and planned residential development approval for a 90-lot subdivision on approximately 17.85 acres in the Residential 4 Dwellings Per Acre (R4) zoning district with associated grading, drainage improvements, pedestrian facilities, landscaping, and street frontage improvements. There is a Category III wetland and unclassified stream onsite. The existing single-family residences and outbuildings will be demolished. The proposed development will take access off of Chain Lake Road. PERMITS/APPROVALS REQUIRED: Preliminary Subdivision Approval, Preliminary Planned Residential Development Approval, Environmental Review, Grading/Engineering Permits, and any State and Federal Permits if applicable. STUDIES REQUIRED: Traffic Study, Drainage Report, Environmental Checklist, Geotechnical Report, Critical Areas Report. APPLICATION PROCESS: A preliminary plat/PRD application is a public hearing review process per City of Monroe Municipal Code (MMC) Chapter(s) 18.84.110 (D) and 21.20.050(F). The preliminary plat and PRD require a public hearing before the Hearing Examiner and a recommendation to the City Council. The public hearing for this project will be noticed separately. APPLICATION DATE: December 19, 2018 NOTICE OF COMPLETE APPLICATION: January 7, 2019 RESUBMITTAL APPLICATION DATE: March 10, 2021 DATE OF NOTICE OF APPLICATION: April 7, 2021 PUBLIC COMMENT PROCEDURE: Submit written comments on or before 5 p.m., April 21, 2021. Comments should address completeness of the application, quality or quantity of information presented, and the project's conformance to applicable plans or code. This will be the only opportunity to comment on the impacts of the proposed plat. STAFF CONTACT: Anita Marrero, Senior Planner @ (360) 863-4513 or amarrero@monroewa.gov. As Monroe City Hall is closed to the public, documents are available for review online at www.monroewa.gov/799/Garibaldi-Preliminary-Plat-PRD. If you would like copies of any documents, please email the Permit Division at landuse@monroewa.gov. Copies are at cost.
Published: April 7, 2021. EDH923959

EXHIBIT 8-B

AFFIDAVIT OF POSTING NOTICE OF APPLICATION

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake Rd., Monroe WA 98272
Address

Garibaldi Preliminary Plat - PLPRD2018-02
Application Name and File #

I, Jason Anderson (print name) being first duly sworn on oath, depose and say: That on **the 7th day of April, 2021,** I posted one2 signs for the **Notice of Application for Garibaldi Preliminary Plat** on or near the property concerned, in a conspicuous place; and on the correct date of posting of said notice.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Signed

4/7/21
Date

EXHIBIT 8-C

AFFIDAVIT OF POSTING NOTICE OF APPLICATION

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake Rd., Monroe WA., 98272
Project Address

Garibaldi Preliminary Plat PLPRD2018-02
Application Name and File #

I, Kim Shaw (print name) being first duly sworn on oath, depose and say: That on the **7th day of April, 2021,** I posted 1 notice in the City Hall lobby for the **Notice of Application for Garibaldi Preliminary Plat** and on the correct date of posting of said notice.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Kim Shaw
Signed

4/6/2021
Date

EXHIBIT 8-D

AFFIDAVIT OF MAILING
NOTICE OF APPLICATION

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake Rd., Monroe WA 98272
Address

Garibaldi Preliminary Plat PLPRD2018-02
Application Name and File #

I, Kim Shaw (print name) being first duly sworn on oath, depose and say: That on **the 6th day of April, 2021,** I made application with Click2Mail to mail on **April 7th, 2021** a copy with prepaid postage of the **Notice of Application for Garibaldi Preliminary Plat.** Attached is a list of names and addresses to whom this information was mailed to.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Kim Shaw
Signed

4/6/2021
Date

Taxpayer	Address	City	State	Zip Code
ALTAYAR MOHANNAD	19827 137TH ST SE	MONROE	WA	98272
BACON ROBERT B & JANET B TTEE	14311 KENWANDA DR	SNOHOMISH	WA	98296
BALLINGER COMMERCIAL PROPERTIES LLC	13582 CHAIN LAKE RD	MONROE	WA	98272
BALOCH TASNEEM	13643 198TH AVE SE	MONROE	WA	98272
BECKER GERALDINE LOUISE	9505 NE 13TH ST	BELLEVUE	WA	98004
BECKLEY ALAN M/BECKLEY KARA N	13811 CHAIN LAKE RD	MONROE	WA	98272
BEWICK KENNETH ALLEN & PAULA ANN	13633 198TH AVE SE	MONROE	WA	98272
BHARDWAJ MANUJ/PRIYA	19817 137TH ST SE	MONROE	WA	98272
BHURGRI MASIULLAH/AYESHA	13547 199TH AVE SE	MONROE	WA	98272
BRIDWELL NELSON/DARBY BRIDWELL ROBIN	19869 136TH PL SE	MONROE	WA	98272
BRODY COURTNEY H/MOSHIER MARIANNE T	13539 204TH DR SE	MONROE	WA	98272
BRUNSMAN WILLIAM A	19841 136TH PL SE	MONROE	WA	98272
BUENROSTRO-PEREZ ARIANA G	13860 CHAIN LAKE RD	MONROE	WA	98272-7700
BURCH JOHN & SHELLY	PO BOX 267	TWISP	WA	98856
CAURON JESUS ANDRES/ PIMIPINATO RAFAEL	13428 204TH DR. SE	MONROE	WA	98272
CAVALCANTE FABIO V/JESSICA M	19883 137TH ST SE	MONROE	WA	98272
CHONG YOUNG SHIN	13612 199TH AVE SE	MONROE	WA	98272
CHRISTIAN GUADALUPE M/CHRISTOPHER	20341 135TH PL SE	MONROE	WA	98272
CHRISTOPHER STEPHEN T/MELISSIA B	13628 199TH AVE SE	MONROE	WA	98272
CLARK SHELDON/MARCELA	19855 137TH ST SE	MONROE	WA	98272
CLOTHIER MICHAEL & SHANNA	27419 118TH ST SE	MONROE	WA	98272-9506
COVELLI ENRIQUE/VELEZ SANZ MARTHA E	20334 135TH PL SE	MONROE	WA	98272
CROWLY RITA A/ ROBERT BRUCE	13876 CHAIN LAKE RD	MONROE	WA	98272
DAHLGREN JOHN/KATHLEEN	19813 135TH ST SE	MONROE	WA	98272
DEGTYAREV GEORGIY & SVETLANA	19844 135TH ST SE	MONROE	WA	98272
DENTON WARREN K/ZAIDAH	19841 137TH ST SE	MONROE	WA	98272
DOOMRA SILVIA/WATTS SAGAR	2036 135TH PL SE	MONROE	WA	98272
EAGLEMONT HOA	16531 13TH AE W #A107	LYNNWOOD	WA	98037
EAGLEMONT HOMEOWNER'S ASSOCIATION	524 SECOND AVE STE 500	SEATTLE	WA	98104
EASTON COVE HOMEOWNERS ASSOCIATION	8201 164TH AVE NE STE 200	REDMOND	WA	98052
ECHELBARGER ERIC/ANKLEY CRYSTAL	13679 199TH AVE SE	MONROE	WA	98272
ECKELAMP-WOOD RICHARD/CRESON DANIELLE	13671 198TH AVE SE	MONROE	WA	98272
ELMUGHRABI AMER O/ABULBASAL FARAH	19797 135TH ST SE	MONROE	WA	98272
ENGELS JOHN A/ JANELL	13701 199TH AVE SE	MONROE	WA	98272
ESPINOZA CARSON	13618 199TH AVE SE	MONROE	WA	98272
FARINELLA LUKE/FLEET FARINELLA MELODY	1327 204TH DR. SE	MONROE	WA	98272
FONG CATHERINE	PO BOX 365	ISSAQUAH	WA	98027
FOSTER CHRISTINA H	14327 123RD AVE NE UNIT C	KIRKLAND	WA	98034
FRANCO DALILA & OMAR	14617 CHAIN LAKE RD	MONROE	WA	98272-9793
GARIBALDI LAKE LLC	1010 MARKET ST	KIRKLAND	WA	98033
GILLON JESSICA R & ERIC R	13230 CHAIN LAKE RD	MONROE	WA	98272
GRANT BRIAN & LINDA	13304 CHAIN LK RD	MONROE	WA	98272
GRIFFIN RICHARD DALE	13305 CHAIN LAKE RD	MONROE	WA	98272
GRUMMONS JEFFREY A/DEANA M	19798 137TH ST SE	MONROE	WA	98272
GUTHA THULASIRAM/GAYATHRI	20312 135TH PL SE	MONROE	WA	98272
HARP ROBERT K & DENISE	13704 CHAIN LAKE RD	MONROE	WA	98272-8760
HAZELWOOD PATRICK T/MONICA	19816 135TH ST SE	MONROE	WA	98272
HEATH BRITT	13252 NE 47TH ST	BELLEVUE	WA	98005
HELMAN JEFFREY/ DEBORAH	19862 135TH ST SE	MONROE	WA	98272
HENDRICKS RANDEN/PAULA	13205 CHAIN LK RD	MONROE	WA	98272
HENKE DAWN V/RYAN M	13623 198TH AVE SE	MONROE	WA	98272
HESS JAMES RICHARD & EDITH FRANCIS	PO BOC 693	SULTAN	WA	98294
HILL KAY C TTEE	13424 205TH AVE SE	MONROE	WA	98272-7769
HOHENSTEIN DEREK A/JENNIFER L	13907 CHAIN LAKE RD	MONROE	WA	98272

IENG KELVIN/TRUONG BRIANNA	20340 135TH PL SE	MONROE	WA	98272
JAGNE SULAYMAN	13768 199TH AVE SE	MONROE	WA	98272
JAMES BRYAN SCOTT & BRIDGET CATHLEEN	13579 199TH AVE SE	MONROE	WA	98272
JEFFERIES PHILIP T/LEWIS LANCE W	13443 204TH DR SE	MONROE	WA	98272
JONES GRIFFEN G/JONES IVY	13455 204TH DR. SE	MONROE	WA	98272
JONES PAUL & COLLETTE TRUST	13617 199TH AVE SE	MONROE	WA	98272
JONES TERRY/CONSTANCE	13605 199TH AVE SE	MONROE	WA	98272
JYOTI RISHI\ THIRTHA RASHMI	13796 199TH AVE SE	MONROE	WA	98272
KAMOJWALA V/VADIYALA SHIRISHA	13483 204TH DR SE	MONROE	WA	98272
KANSARA MEHUL/NISHA	9979 242ND WAY NE	REDMOND	WA	98053
KBHPNW LLC	320 120TH AVE NE SUITE 202	BELLEVUE	WA	98005
KESTREL RIDGE 27 LLC	15 LAKE BELLEVUE DR. SUITE 102	BELLEVUE	WA	98005
KORSLUND JOSEPH M	13414 CHAIN LAKE RD	MONROE	WA	98272
KORSLUND LARRY JO & VERNA L	13410 CHAIN LAKE RD	MONROE	WA	98272-7703
KUMAR GANDHAM KIRTHI/NAMRATHA	13419 204TH DR. SE	MONROE	WA	98272
KUMAR PRASHANT V/ ANJANI	13669 199TH AVE SE	MONROE	WA	98272
LINTON JAMISON G	11801 97TH LN NE B051	KIRKLAND	WA	98034
LONG JEFFERY/MARVIS	19842 136TH PL SE	MONROE	WA	98272
LUONG LIEM T	13659 198TH AVE SE	MONROE	WA	98272
LUPASCU SIMION/LUNGU DOINA	13647 199TH AVE SE	MONROE	WA	98272
MACCAUL ROBERT/JOANN	19852 137TH ST SE	MONROE	WA	98272
MACDONALD STEVEN L/HSIAOFANG	13565 199TH AVE SE	MONROE	WA	98272
MADDEX TIMOTHY E	13316 CHAIN LAKE RD	MONROE	WA	98272-7703
MAINVUE WA LLC	1110 112TH AVE NE SUITE 202	BELLEVUE	WA	98004
MAMIYA KATSUMI/HIROKA	1370 116TH AVE NE STE 201	BELLEVUE	WA	98004
MANZIONE LISA M	13613 198TH AVE SE	MONROE	WA	98272
MARCELLIN MICHELLE	19838 137TH ST SE	MONROE	WA	98272
MONROE CITY OF	806 W MAIN ST	MONROE	WA	98272
NASIN KHALID	19876 135TH ST SE	MONROE	WA	98272
NEVILLE MICHELLE	13724 199TH AVE SE	MONROE	WA	98272
OTTEY HERBERT/GRACE	19824 137TH ST SE	MONROE	WA	98272
PAKALAPATI RAMA KRISHNAM RAJU/BINDU M	13670 199TH AVE SE	MONROE	WA	98272
PAL ANESH/PREETIKA	13627 199TH AVE SE	MONROE	WA	98272
PECKHAM SHAWN /LAURA J	13420 204TH DR. SE	MONROE	WA	98272
PETROX MAKSYM $ SAVVA KSENIYA	13593 199TH AVE SE	MONROE	WA	98272
PETTY DAVID/LAURIE	13656 199TH AVE SE	MONROE	WA	98272
PRASAD SWASTHA/RANJANA NEELAM	19855 136TH PL SE	MONROE	WA	98272
PRIKHODKO SERGEY/YELENA	19871 137TH ST SE	MONROE	WA	98272
RABADAN EUTIQUIO TERAN	13868 CHAIN LAKE RD	MONROE	WA	98272-7700
ROE DAWN LEE	13471 204TH DR SE	MONROE	WA	98272
ROMANYUK ANITA/ ALEXANDER	13232 CHAIN LAKE RD	MONROE	WA	98272
SAMPAT SUMIT K/BHAVANA SUMIT	19868 137TH ST SE	MONROE	WA	98272
SAMY KAUSALYA R K/DUPPANAPUDI S	20356 135TH PL SE	MONROE	WA	98272
SCHENCK GARY/ JANA	13689 199TH AVE SE	MONROE	WA	98272
SCHRADER JASON ANDREW/TERRA	20315 135TH PL SE	MONROE	WA	98272
SEVERSON DEBORAH/DALE	19835 135TH ST SE	MONROE	WA	98272
SHAW JEFFREY	19885 136TH PL SE	MONROE	WA	98272
SIMPSON LISA	13746 199TH AVE SE	MONROE	WA	98272
SINCLAIR HEIGHTS HOA	16030 JUANITA-WOODINVILLE WAY NE	BOTHELL	WA	98011
STASSEK LARISSA M/HONSE JEFFREY P	9922 NE 116TH STREET UNIT 311	KIRKLAND	WA	98034
STOCKERT JUSTIN T	13773 CHAIN LAKE RD	MONROE	WA	98272
STUTZ JON JUSTUS & BONNIE JEAN	13422 205TH AVE SE	MONROE	WA	98272-7769
SUSCHIK MICHAEL/ TAMARA	13290 CHAIN LAKE RD	MONROE	WA	98272
TAUNT DAYLON/PENMAN JAMES	19812 137TH ST SE	MONROE	WA	98272
UDOM KHAM	20323 135TH PL SE	MONROE	WA	98272

UPTON KEITH P/WEBER CHRISTOPHER AARON	13525 204TH DR SE	MONROE	WA	98272
VALERA VAZQUEZ GILBERTO/JUAN/LUIS	13819 CHAIN LAKE RD	MONROE	WA	98272
WATSON GLENNA A	19890 135TH ST SE	MONROE	WA	98272
WESTFAHL JEFFREY J/CORINA O	14751 N KELSEY ST STE 105-516	MONROE	WA	98272
WEYHRAUCH CHAD W/BRENDA	19797 136TH PLACE SE	MONROE	WA	98272
WITMER LORIE	19811 136TH PL SE	MONROE	WA	98272
ZAKARIYA BOUTAYNA/BENNIS ABDELMAJID	13637 199TH AVE SE	MONROE	WA	98272
ZHANG XIANRONG	19798 135TH ST SE	MONROE	WA	98272
ZOBELL SHELDON J/ELLEN SHERRI	13704 199TH AVE SE	MONROE	WA	98272

EXHIBIT 9-A

From: Bryan James
To: Anita Marrero; LandUse Permits
Subject: Land Use Application # PLPRD2018-02
Date: Tuesday, April 20, 2021 5:34:32 PM

Project Name: Garibaldi Preliminary Plat/ Planned Residential Development

Project File# PLPRD2018-02

Topic: Notice of Land Use Application

Anita,

This email is regarding the proposed land use application for the above project.

1. Per the bulk requirements portion of the municipal codes (22.16.040) for a R4 zone there can only be 4 dwellings per acres (gross area). The preliminary plan set provided shows 90 lots with houses. Based on 17.85 acres the 90 houses would lead the calculation to be just over 5 houses per acre. This would not fall into the land use application.
2. In the SEPA checklist section 10 (Aesthetics) the response offers that the views of the new development will be an improvement over the, "current sparse forested and paster areas". This is a matter of opinion that we disagree with, but I would like to refer you to section 5 where some of the animals are listed.
3. While the views of the paster are opinion based, the fact is the overall views of the Western Cascades will be blocked. Per SEPA checklist section 10 (Aesthetics) the response indicates the houses can be up to the maximum allowed 35 foot height. The topography slopes most drastically from north to south, and more gently from west to east. Simple trigonometry will show that the houses on the western boarder of the plot will in fact block significate views from the existing homes.
4. The last point I wanted to bring up was a variance permit criteria for approval form that I found on the city website. I did not see this form with the information provided by Garibaldi. I would be particularly interested in the response to numbers:

   2. The variance is necessary because of special circumstances relating to the size, shape, topography, location or surroundings of the subject property to provide it with use rights and privileges permitted to other properties in the vicinity and in the zoning district in which the subject property is located;

   4. The variance is the minimum necessary to grant relief to the applicant;
   5. The strict enforcement of the provisions of this title will create an unnecessary hardship to the property owner;

Please let me know if you have any questions.

Bryan James

13579 199th Ave SE.

From: Kees, Ashley C (DFW)
To: Anita Marrero
Subject: RE: Determination of Non-Significance for Garibaldi Preliminary Plat
Date: Friday, December 17, 2021 9:20:33 AM
Attachments: image001.jpg
image002.jpg

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Good Morning,

The application materials show Stream 1, an unnamed tributary to Woods Creek, as a seasonal non-fish stream. Given the stream's nearby confluence with Type F waters, it's likely that this is a Type F stream. Due to anthropogenic changes to the streams, such as installation of non-fish passable culverts, fish may not currently be present in the stream. However, based on desktop review and without sufficient evidence to support otherwise, this appears to be a Type F stream.

Thank you for the opportunity to provide comment on this proposal.

Ashley Kees
Snohomish Watershed Habitat Biologist
Washington Department of Fish & Wildlife
Region 4, Mill Creek Office
(425) 765-9157 (cell)
Ashley.Kees@dfw.wa.gov

From: Kim Shaw <KShaw@monroewa.gov>
Sent: Monday, December 6, 2021 8:12 AM
To: R4Cplanning <R4Cplanning@dfw.wa.gov>
Subject: Determination of Non-Significance for Garibaldi Preliminary Plat

External Email

Good morning!

Please see that attached Determination of Non-Significance for the Garibaldi Preliminary Plat/Planned Residential Development. For further information and questions, please contact Senior Planner, Anita Marrero @ (360) 863-4513 or amarrero@monroewa.gov .

Thank you,
Kim




Kim Shaw, CPT | Land Use Permit Supervisor
806 West Main Street | Monroe, WA 98272
360-863-4532 / www.monroewa.gov

NOTE: This email is considered a public record and may be subject to public disclosure.

20 April 2021

Ms. Anita Marrero
Senior Planner
City of Monroe
806 W. Main Street
Monroe, WA 98272

Re: Garibaldi PRD — Project File No. PLPRD2018-02 Resubmittal 03/10/21 Eaglemont Residents Petition

Dear Ms. Marrero,

Resubmittal Application Dated March 10, 2021

On March 20, 2019 residents of Eaglemont submitted a petition to the City of Monroe Planning Department requesting disapproval of the Garibaldi Planned Residential Development application as proposed in PLPRD2018-02 and SEPA2018-13 filings. The Resubmittal Application dated March 10, 2021 does not address or mitigate the issues raised in the original petition application and in fact exasperate the impact on Eaglemont residents with the increased number of homes that does not appear to comply with R4 zoning (90 lots on 17.85 acres equals 5 homes per acre). Contrary to the filed documents, neighboring resident views of adjacent meadow and mountains, ambient lighting, noise, and property values will be adversely impacted by the proposed development.

Again the undersigned Eaglemont residents respectfully petition the City of Monroe Planning Department to disapprove the Garibaldi project as currently proposed for the same reasons listed originally.

Background
Neighboring Eaglemont community residents located on 199th Ave SE (directly west and adjacent to the proposed development) purchased their property at an added premium for the enjoyment and investment appreciation of the sweeping views of the open pasture, forested foothills, and the Cascade mountain range. In addition to these aesthetic values, the close proximity of the adjacent open space provides solitude and a natural environment for horses, deer, coyotes, and other wildlife. See attached Photos 1a, 2a, 2b, 3a, and 3b.

Views
SEPA Check List item 10.b.
"*No views would be obstructed by the project, in part because the site is located at lower elevations on the existing sloped topography.*"

However, the views from adjacent Eaglemont properties will be significantly or totally blocked by the new construction. The platted lots along the west boundary of the proposed development are not at lower elevations on the existing sloped topography that would avoid view impact. Even with an excavation of 10 feet from the existing topography, the 35 feet maximum structure height will not prevent view obstruction. See attached Figures 1a, 1b, 2a, and 2b.

Light
SEPA Check List item 11.a.
"*Neighborhood lighting and vehicle headlights will produce some level of light or glare during non-daylight hours.*"

Eaglemont owners adjacent the proposed development do not currently experience vehicle lights shining through windows at the back of their homes, outdoor rooms, and bedrooms especially from approaching traffic on Road B. This adversely impacts their non-daylight quality of life including sleep and future home resale. See attached Figures 3a and 3b.

SEPA Check List item 11.c.

"Ambient lighting from adjacent single-family residences, street lights, and vehicle headlights from Chain Lake and local access roads in the vicinity of the site could potentially affect the proposal."

This also applies to Eaglemont owners adjacent the proposed development that do not currently experience disruptive ambient lighting from behind their homes where kitchens, dining spaces, living rooms, outdoor rooms, and bedrooms are located. This adversely impacts their quality of life including sleep and future home resale. Refer to attached Photo 1a.

Sincerely,
Eaglemont Residents

Signature	Printed Name	House Address	Lot	Date
	PAUL JONES	13617-199 AVE SE	34	04/20/21
	COLLETTE JONES	13617-199 AVE SE	34	4/20/21
	MASSEY BHARGAVA	13547 199th Ave SE	25	04/20/21
	Steven MacDonald	13565 199th Ave. S.E.	26	4/26/21
	Bryan James	13579 199th Ave S.E	27	4/20/21
	Maksim Petrov	13593 199th AVE SE	32	4/20/21
	Kseniya Savva	13593 199th Ave SE	32	4/20/21
	Anesh Pal	13627 199th AVE SE	35	4/20/21
	TERRY JONES	13605 199TH AVE SE	33	4/20/21
	CONNIE JONES	13605 199TH AVE SE	33	4/20/21

Submitted by Paul Jones, 425.200.0925, ppwwjones@gmail.com



Photo 1a: Current View of Garibaldi Planned Residential Development (PRD) Site



Photo 1b: Garibaldi Preliminary PRD Plat Plan Adjacent Eaglemont Residents



Photo 2a: Current View from Eaglemont Lot 33 Home First Floor



Photo 2b: Current View from Eaglemont Lot 33 Home Second Floor

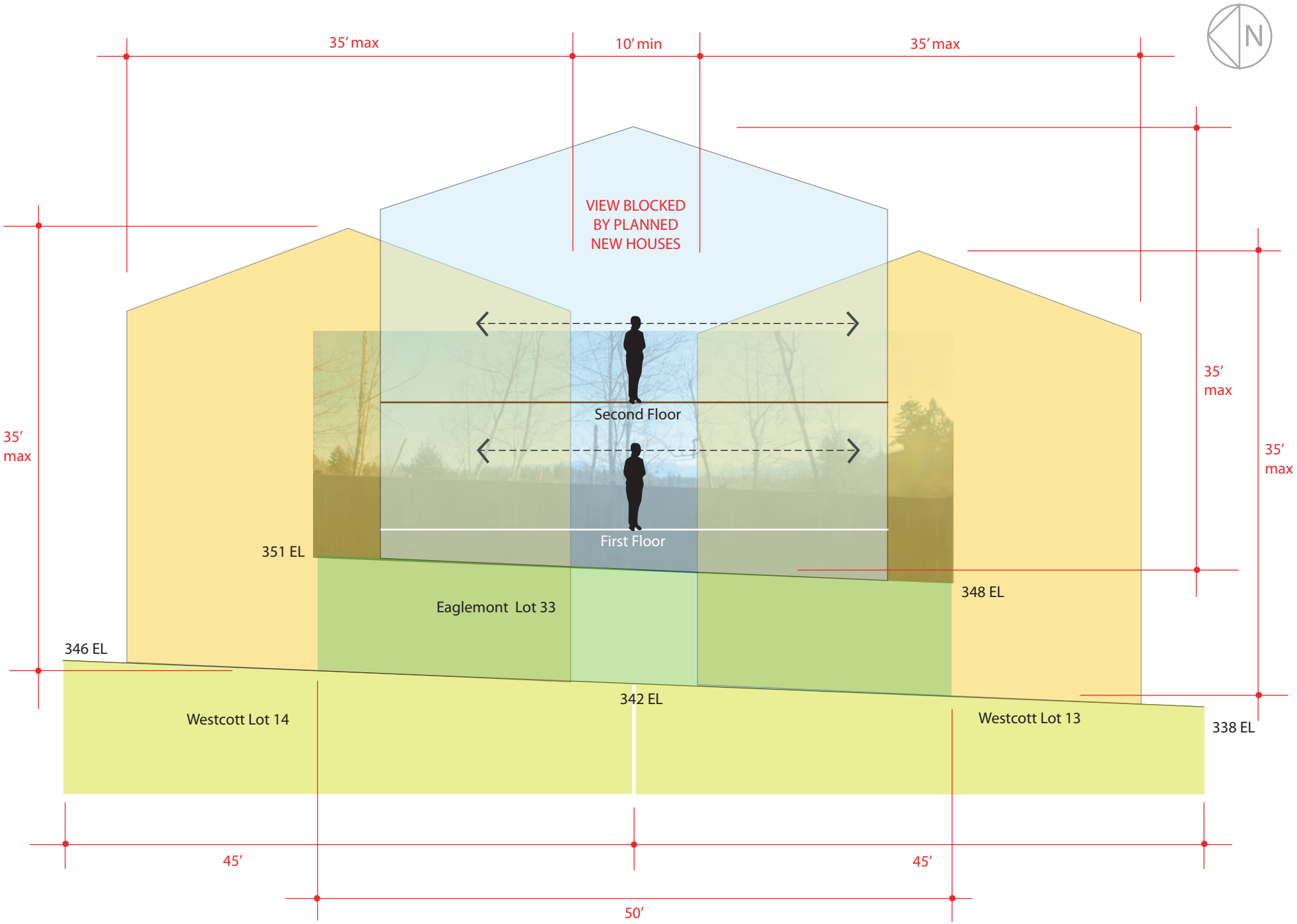


Fig 1a: Eaglemont Lot 33 View Obstructed by Garibaldi PRD

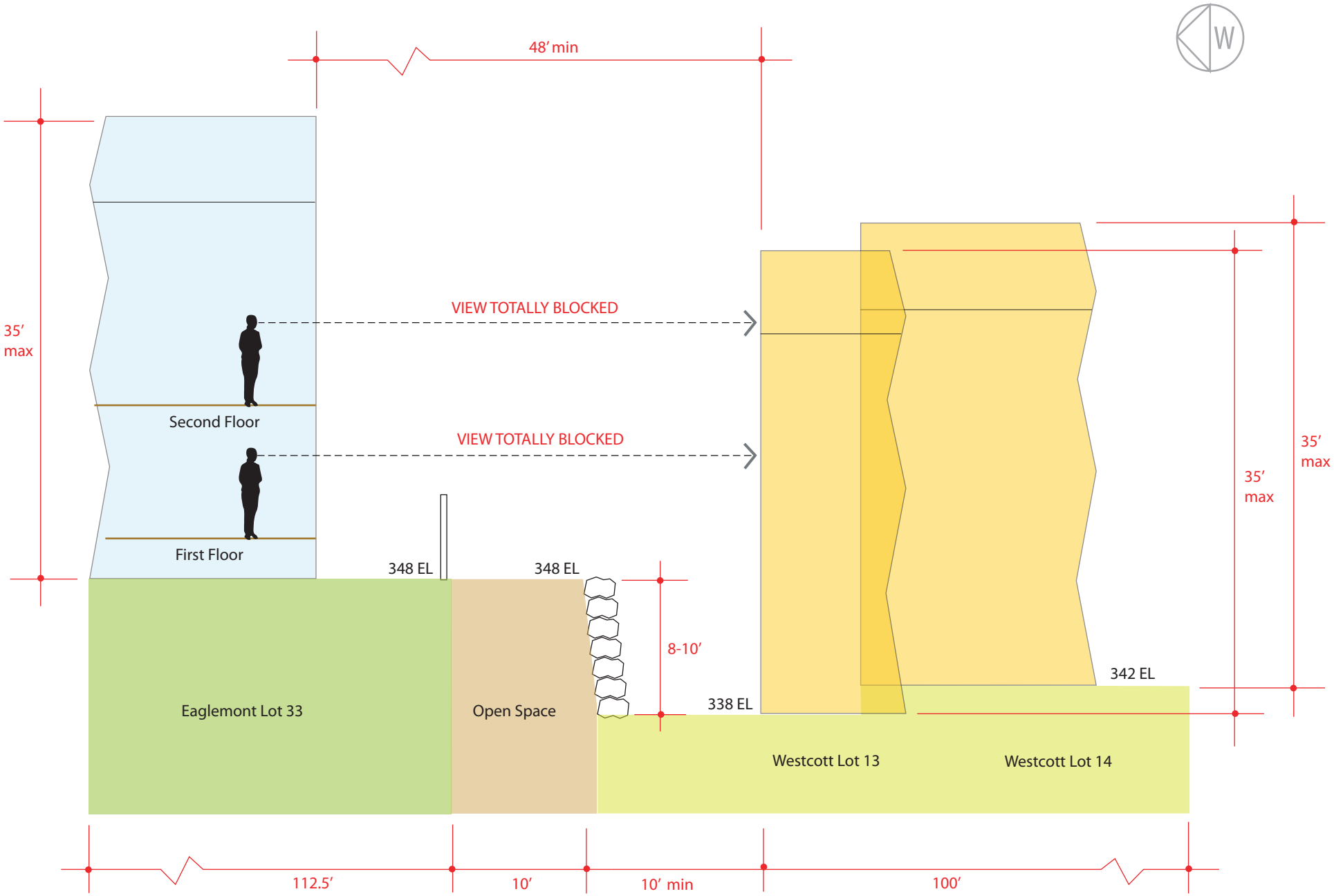


Fig 1b: Eaglemont Lot 33 View Obstructed by Garibaldi PRD



Photo 3a: Current View from Eaglemont Lot 34 Home First Floor



Photo 3b: Current View from Eaglemont Lot 34 Home Second Floor

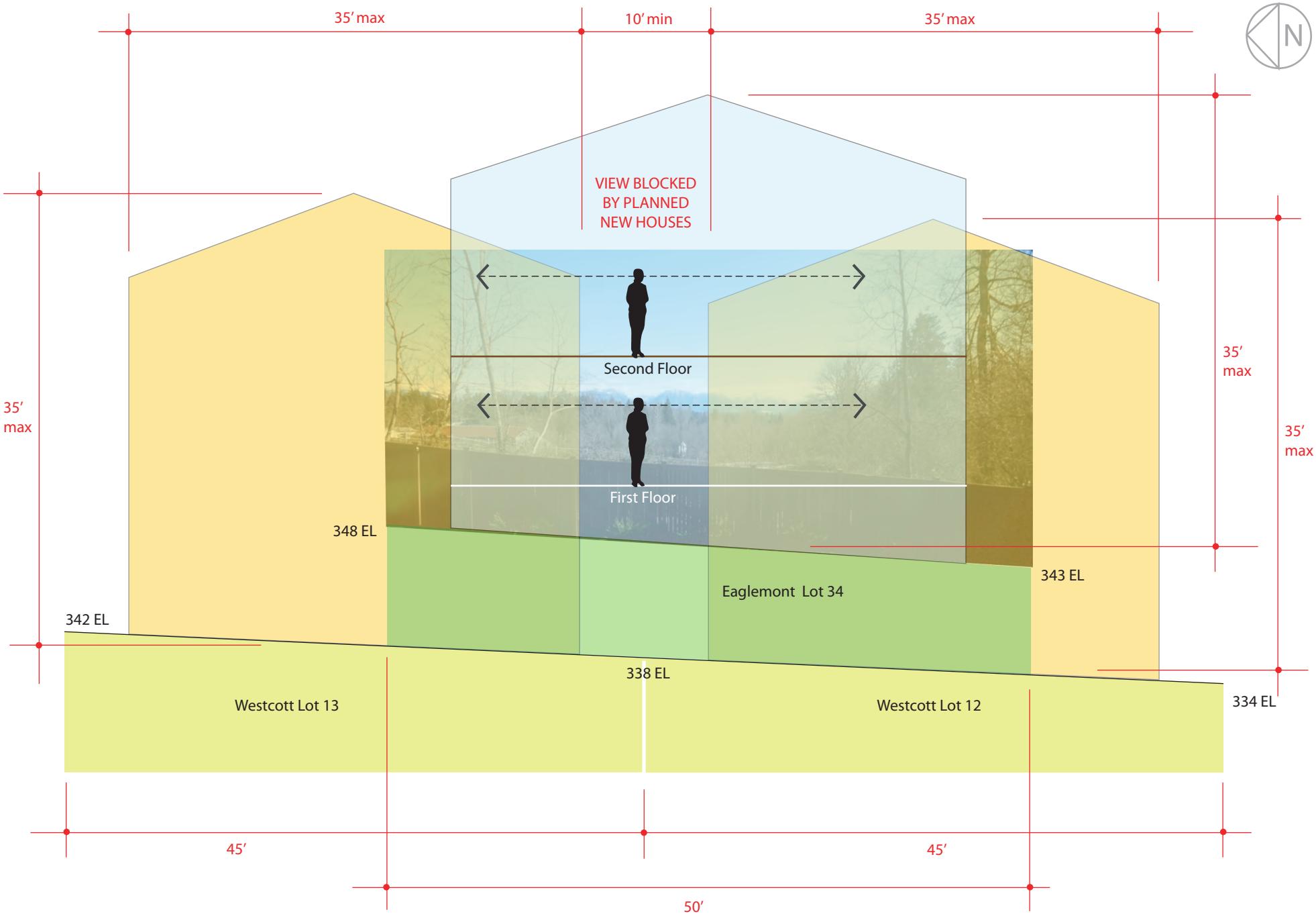


Fig 2a: Eaglemont Lot 34 View Obstructed by Garibaldi PRD

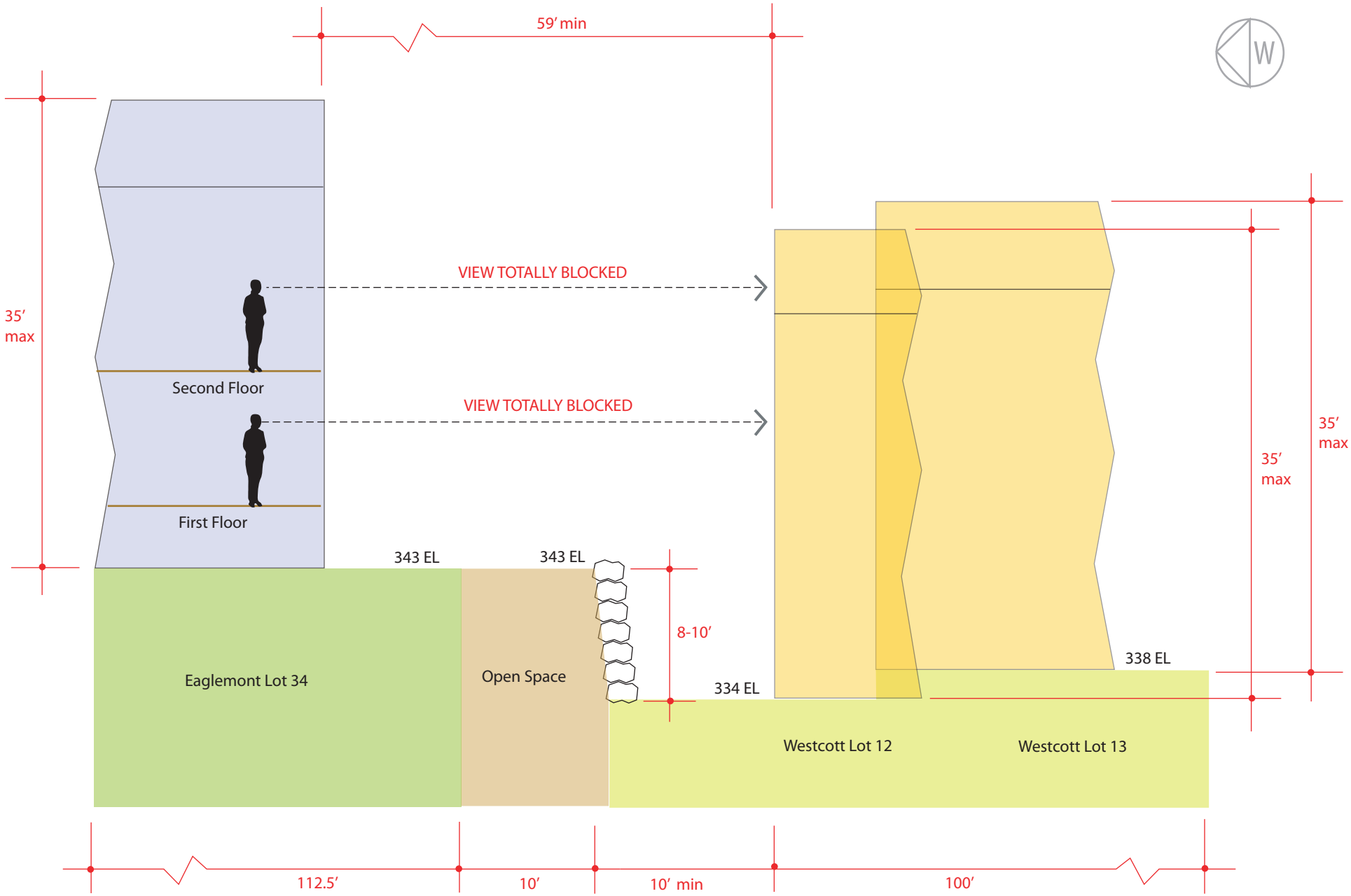


Fig 2b: Eaglemont Lot 34 View Obstructed by Garibaldi PRD

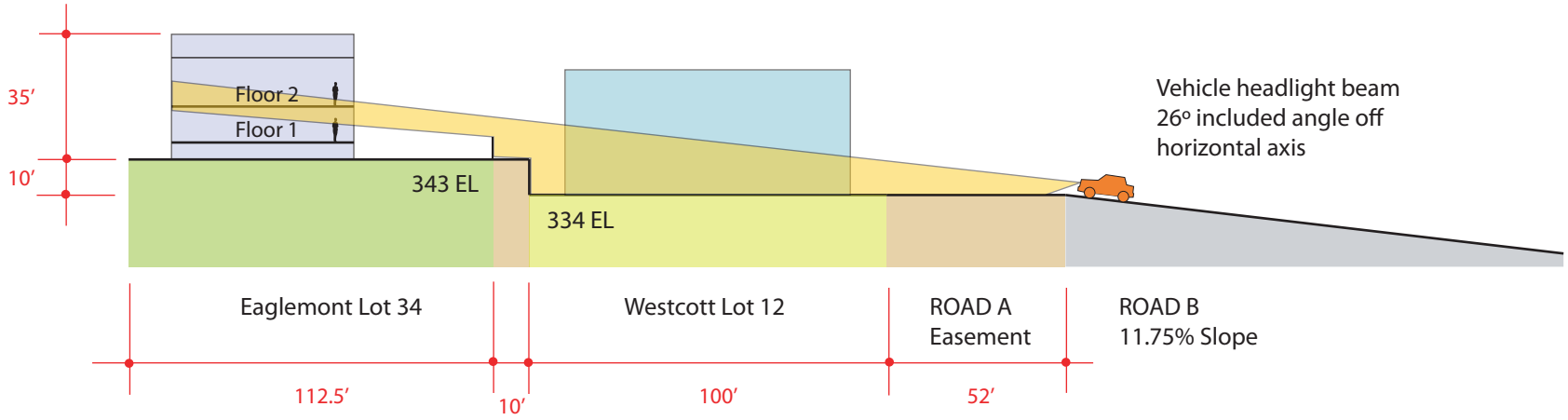


Fig 3a: Vehicle Headlight Glare from Garibaldi PRD Road B

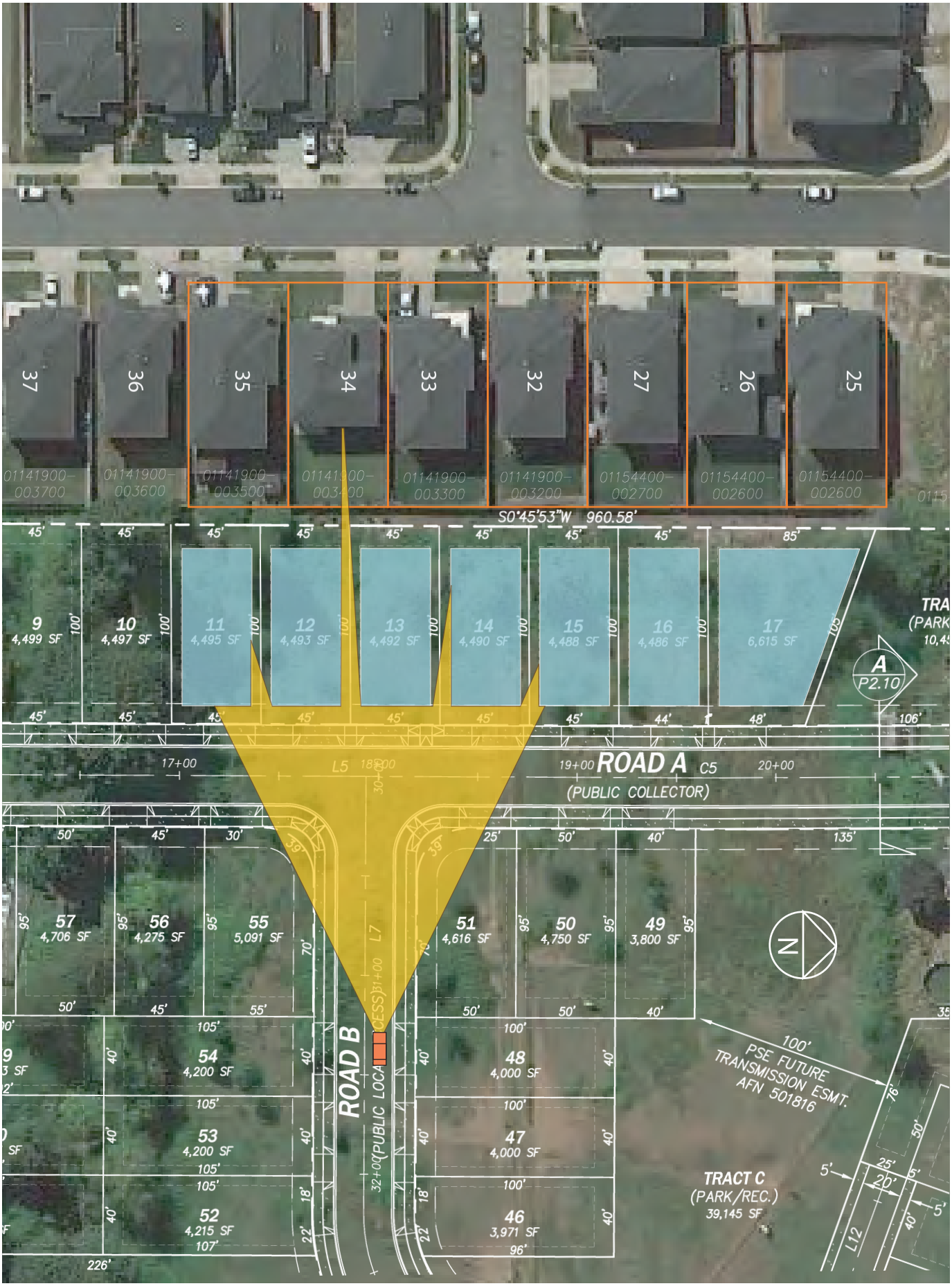


Fig 3b: Vehicle Headlight Glare from Garibaldi PRD Road B

12 March 2019

Ms. Anita Marrero
Senior Planner
City of Monroe
806 W. Main Street
Monroe, WA 98272

Re: Garibaldi PRD — Project File No. PLPRD2018-02 Eaglemont Residents Petition

Dear Ms. Marrero,

The undersigned Eaglemont residents respectfully petition the City of Monroe Planning Department to disapprove the Garibaldi Planned Residential Development application as currently proposed in PLPRD2018-02 and SEPA2018-13 filings. Contrary to the filed documents, neighboring resident views, ambient lighting and noise, and property values will be adversely impacted by the proposed development.

Background
Neighboring Eaglemont community residents located on 199th Ave SE (directly west and adjacent to the proposed development) purchased their property at an added premium for the enjoyment and investment appreciation of the sweeping views of the open pasture, forested foothills, and the Cascade mountain range. In addition to these aesthetic values, the close proximity of the adjacent open space provides solitude and a natural environment for horses, deer, coyotes, and other wildlife. See attached Photos 1a, 2a, 2b, 3a, and 3b.

Views
SEPA Check List item 10.b.
"*No views would be obstructed by the project, in part because the site is located at lower elevations on the existing sloped topography."*

However, the views from adjacent Eaglemont properties will be significantly or totally blocked by the new construction. The platted lots along the west boundary of the proposed development are not at lower elevations on the existing sloped topography that would avoid view impact. Even with an excavation of 10 feet from the existing topography, the 35 feet maximum structure height will not prevent view obstruction. See attached Figures 1a, 1b, 2a, and 2b.

Light
SEPA Check List item 11.a.
"*Neighborhood lighting and vehicle headlights will produce some level of light or glare during non-daylight hours."*

Eaglemont owners adjacent the proposed development do not currently experience vehicle lights shining through windows at the back of their homes, outdoor rooms, and bedrooms especially from approaching traffic on Road B. This adversely impacts their non-daylight quality of life including sleep and future home resale. See attached Figures 3a and 3b.

SEPA Check List item 11.c.
"Ambient lighting from adjacent single-family residences, street lights, and vehicle headlights from Chain Lake and local access roads in the vicinity of the site could potentially affect the proposal."

This also applies to Eaglemont owners adjacent the proposed development that do not currently experience disruptive ambient lighting from behind their homes where kitchens, dining spaces, living rooms, outdoor rooms, and bedrooms are located. This adversely impacts their quality of life including sleep and future home resale. Refer to attached Photo 1a.

Noise
SEPA Check List item 7.b.1.
"*Typical residential neighborhood and vehicular noise from established and planned single-family communities in the vicinity of the site will be heard by future home-sites within the project.*"

This also applies to Eaglemont owners adjacent the proposed development that do not currently experience disruptive noise from behind their homes where kitchens, dining spaces, living rooms, outdoor rooms, and bedrooms are located. This adversely impacts their quality of life including sleep and future home resale. Refer to attached Photo 1a.

Sincerely,
Eaglemont Residents

COPY

Signature	Printed Name	House Address	Lot	Date
	PAUL JONES	13617 - 199 AVE SE	34	3/10/19
	COLLETTE JONES	13617-199 Ave SE	34	3/10/19
	Kevin Hankins	13593 199th Ave SE	32	3/10/19
	MASSEY BERGRI	13547 199th Ave SE	25	3/10/19.
	FRED JONES	13605 199TH AVE SE	33	3/10/19
	CONNIE JONES	13605 199TH AVE SE	33	3/10/19
	Steven MacDonald	13565 199th Ave SE	26	3/10/19
	Hsiao Fang MacDonald	13565 199th Ave SE.	26	3/10/19
	Shardene Payne-Hankins	13593 199th ave SE	32	3/11/19
	Anesh Pal	13627 199th AVE SE	35	3/11/19
	Preetika Pal	13627 199th AVE SE	35	3/11/19

Submitted by Paul Jones, 425.200.0925, ppwwjones@gmail.com

Attachments:
Photos 1a, 1b, 2a, 2b, 3a, 3b
Figures 1a, 1b, 2a, 2b, 3a, 3b

cc: Mr. Ben Swanson



Photo 1a: Current View of Garibaldi Planned Residential Development (PRD) Site



Photo 1b: Garibaldi Preliminary PRD Plat Plan Adjacent Eaglemont Residents



Photo 2a: Current View from Eaglemont Lot 33 Home First Floor



Photo 2b: Current View from Eaglemont Lot 33 Home Second Floor

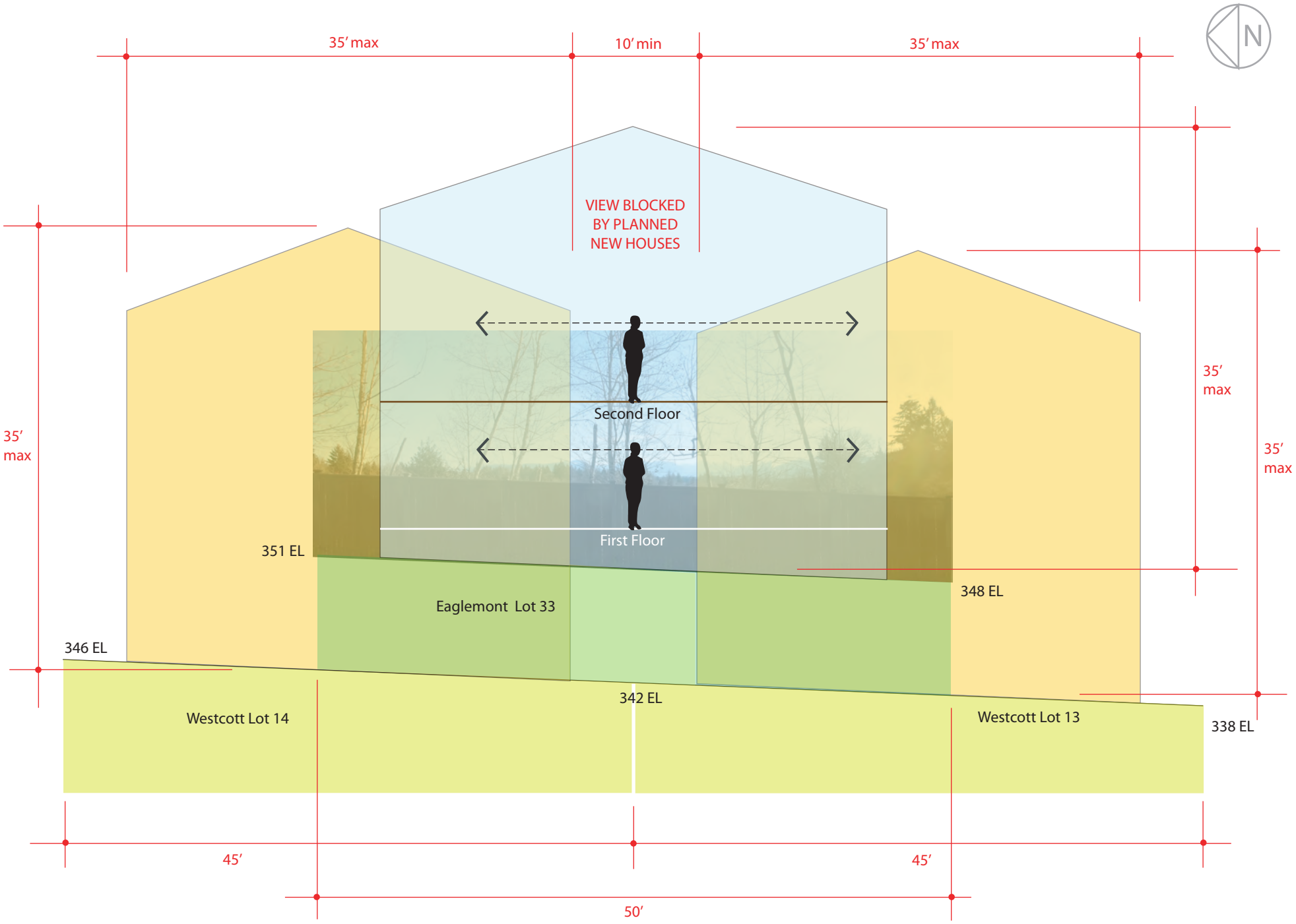


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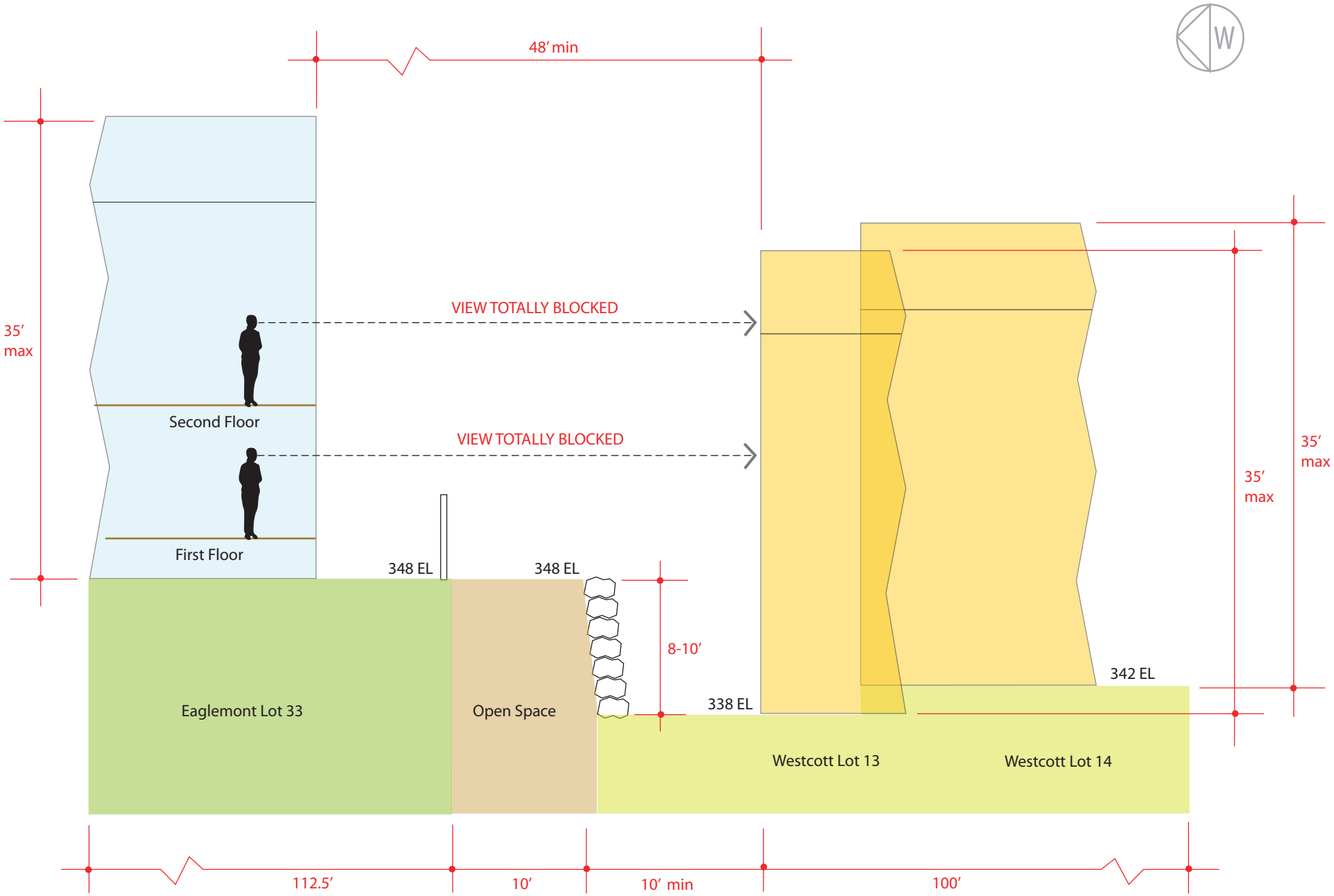


Fig 1b: Eaglemont Lot 33 View Obstructed by Garibaldi PRD



Photo 3a: Current View from Eaglemont Lot 34 Home First Floor



Photo 3b: Current View from Eaglemont Lot 34 Home Second Floor

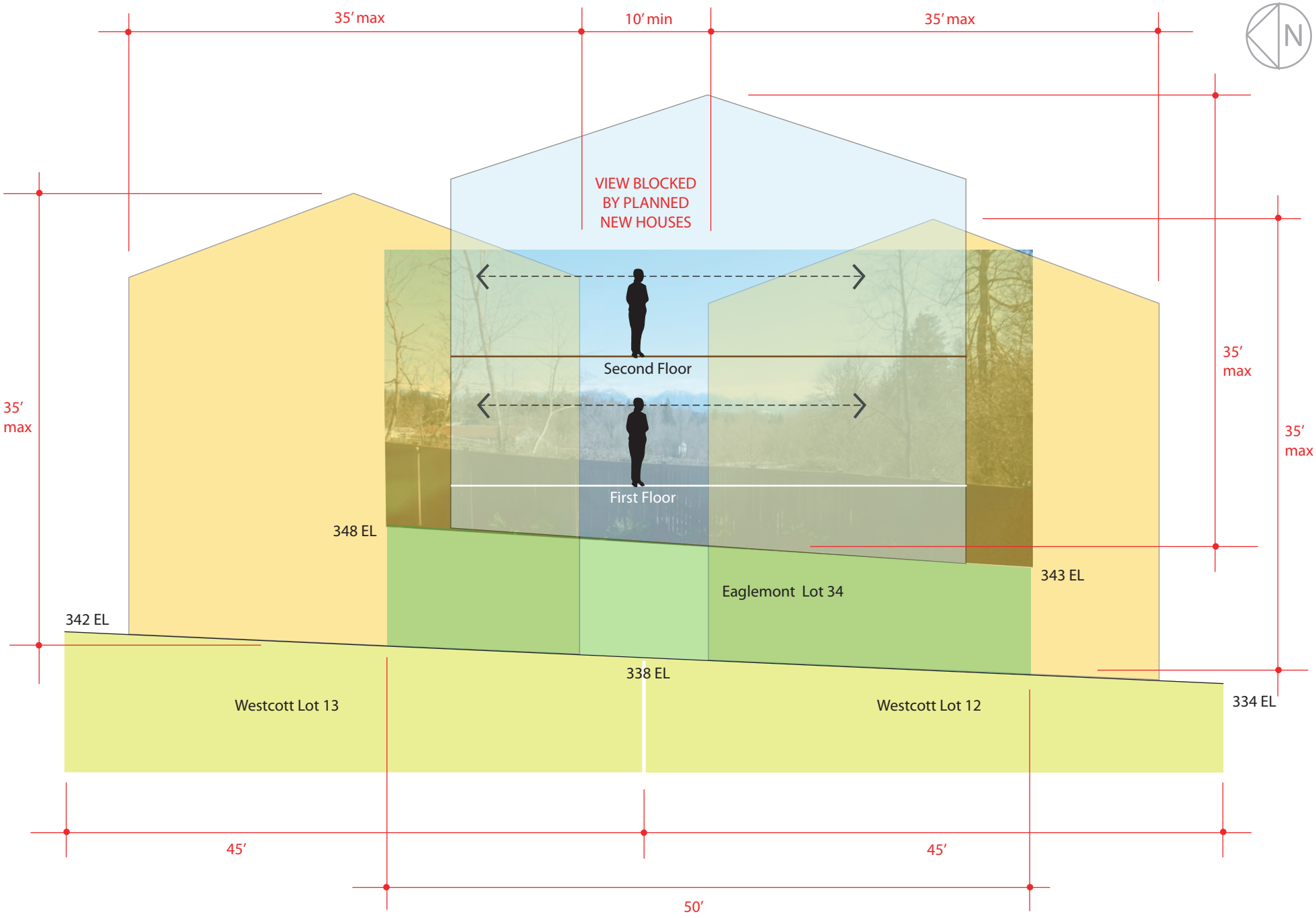


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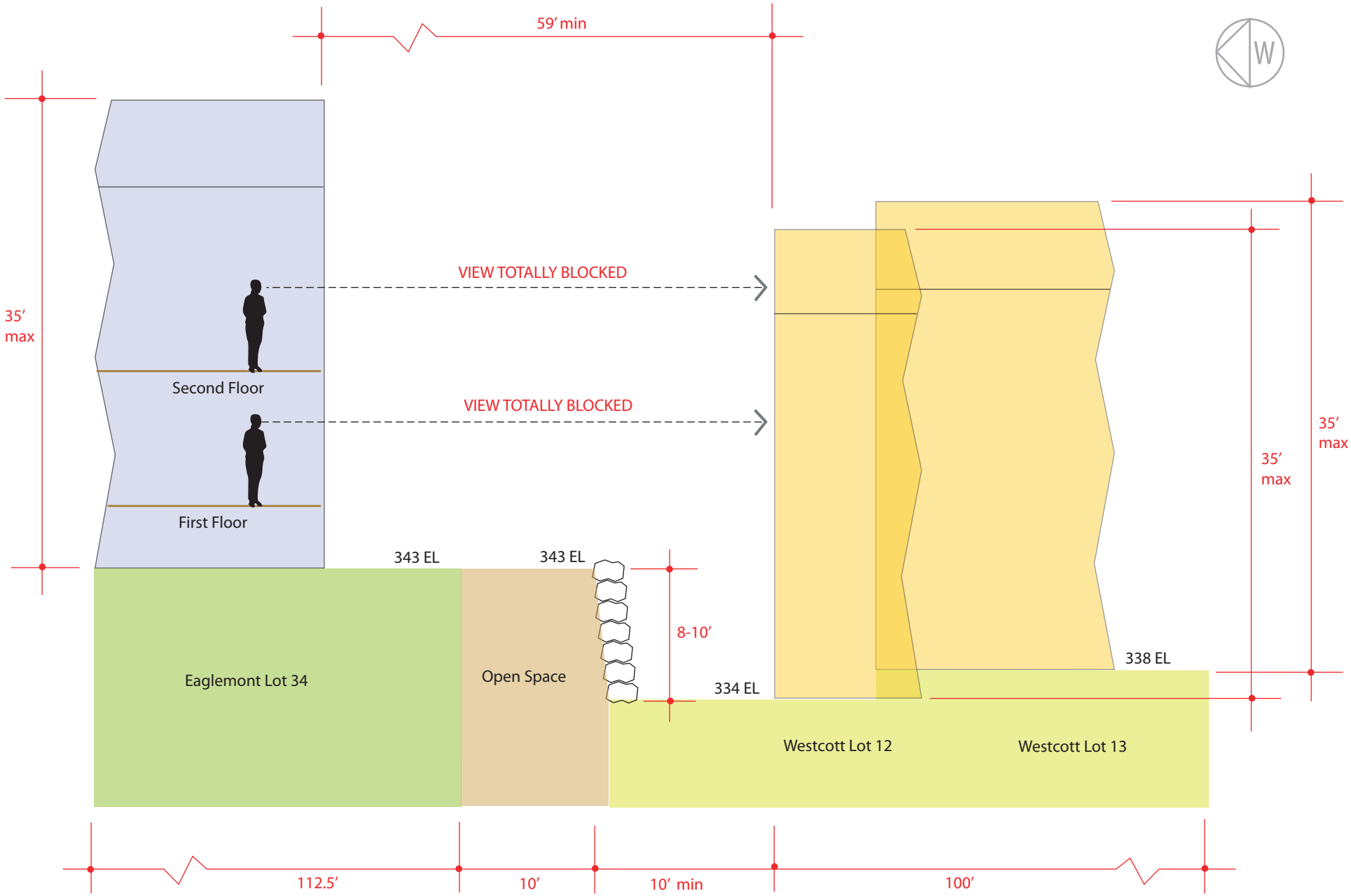


Fig 2b: Eaglemont Lot 34 View Obstructed by Garibaldi PRD

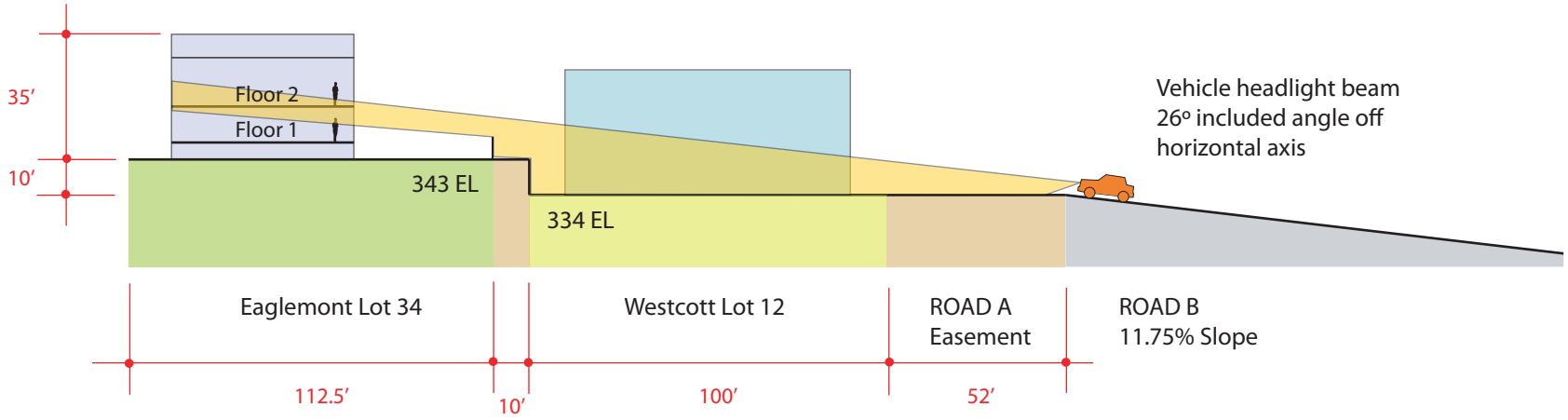


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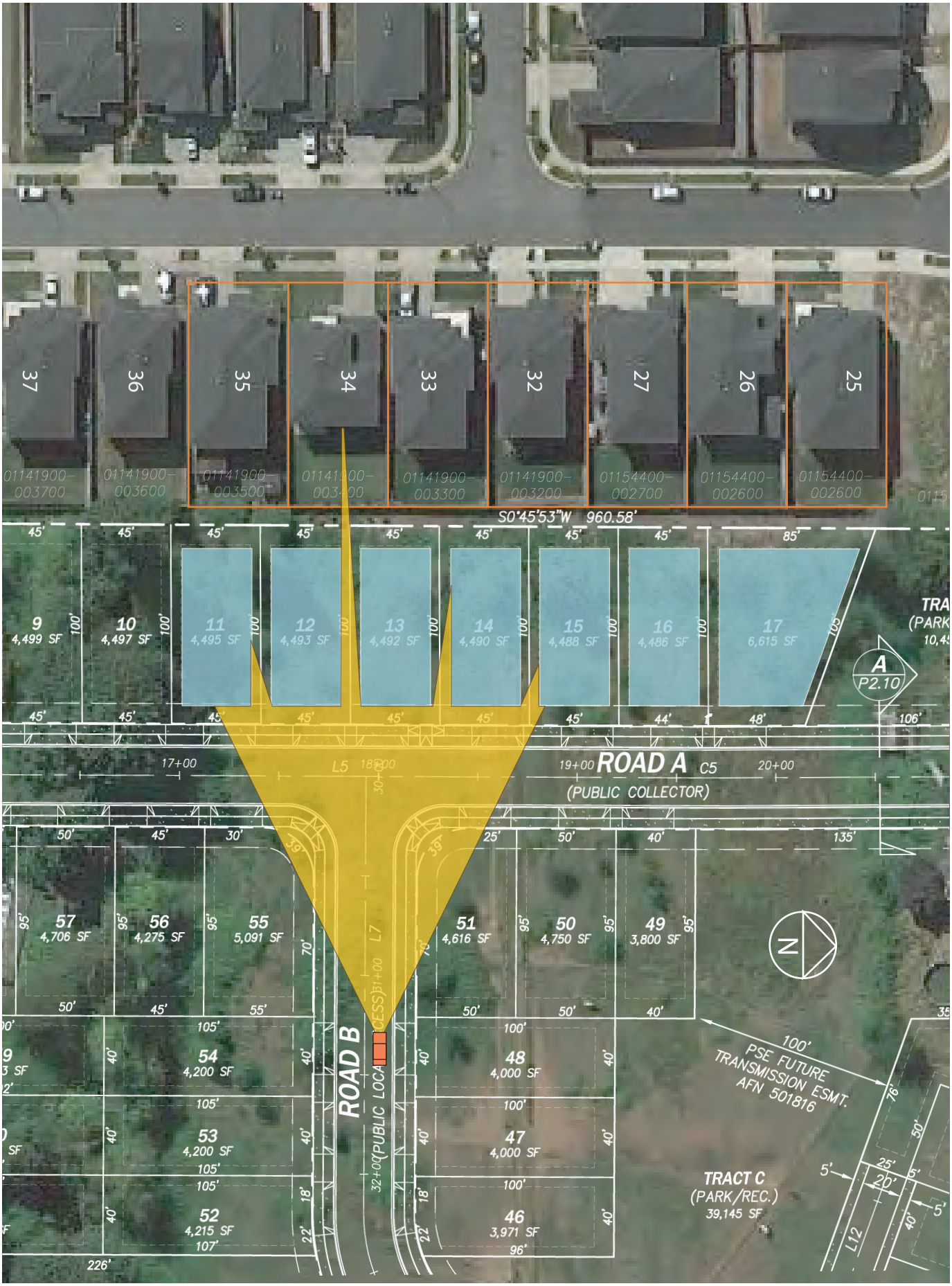


Fig 3b: Vehicle Headlight Glare from Garibaldi PRD Road B

January 21, 2019

City of Monroe
806 West Main Street
Monroe, WA 98272

Anita Marrero, Senior Planner
Hearing Examiner

RE: Garibaldi development / Two Requests prior to demolition and development of property

To Whom it May Concern,

We have lived at 13410 Chain Lake Road for the past 49 years, which borders the Garibaldi proposed development.

First Request;

Amanda Cable leased the property from the Garibaldi corporation in the fall of 2013 with the purpose of conducting a horse farm/stables business. Since this time one could describe the condition of the property as very unkempt. As example, garbage and abandon vehicles have been left through out the property, large piles of horse manure accumulated for years at a time, with very little ever hauled away, is the condition which we believe can be attributed to the rat problem which we experienced and continue to experience for the first time ever at our home.

Over the past 5 years, in the attempt to keep our home free of the rat problem, we have gone to great expense in the way of various rat traps, poisons etc.

We are requesting that a professional exterminator would be hired to conduct an extermination of all the structures on the Garibaldi property prior to demolition. To insure us that the problem has been eradicated we request that written documentation be made available to us.

Second Request;

Because of the close proximity of our property to the Garibaldi development we request that some form of a privacy fence be installed on the North side of the development.

Thank you for your consideration,

Larry D. Korslund
Verna Korslund

Larry and Verna Korslund
13410 Chain Lake Road
Monroe, WA 98272
lvkorslund@integrity.com

From: Anita Marrero
To: Paul Jones; Kim Shaw
Subject: RE: Determination of Non-Significance for Garibaldi Preliminary Plat
Date: Wednesday, December 8, 2021 9:37:58 AM

Hello Paul-

This project is a Planned Residential Development (PRD) which allows a 30% density bonus for meeting the PRD criteria which includes providing park and recreation usable open space.
17.85 X 4 = 71.4 base dwelling units
71.4 x .30 = 21.42 dwelling units
71.4 x 21.42 = 92.82 = 93 total dwelling units

Also, the public hearing is tentatively scheduled for December 30th via Zoom. You will be noticed. I just wanted to give you a heads up.

Thank you,

Anita Marrero | Senior Planner
806 West Main Street | Monroe, WA 98272
360-863-4513 | amarrero@monroewa.gov

NOTE: This email is considered a public record and may be subject to public disclosure.

From: Paul Jones <ppwwjones@gmail.com>
Sent: Monday, December 6, 2021 5:17 PM
To: Anita Marrero <AMarrero@monroewa.gov>; Kim Shaw <KShaw@monroewa.gov>
Subject: Re: Determination of Non-Significance for Garibaldi Preliminary Plat

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Thank you for the DNS notification. Per the DNS proposal description Garibaldi Lake, LLC " is requesting preliminary plat and planned residential development approval for a 90-lot subdivision on approximately 17.85 acres in the Residential 4 Dwellings Per Acre (R4) zoning district". Doesn't the proposed 90 lots exceed the R4 zoning? The 17.85 acres x 4 dwellings per acre is 71.4 dwellings. Doesn't the 90 lots violate the R4 zoning?

Regards,
Paul Jones

On Dec 6, 2021, at 8:02 AM, Kim Shaw <KShaw@monroewa.gov> wrote:

Good morning,

Please see attached the Determination of Non-Significance for the Garibaldi Preliminary Plat/Planned Residential Development, City of Monroe File #PLPRD2018-02/SEPA2018-13. Additional documents are posted on the city's website at this link: http://www.monroewa.gov/799/Garibaldi-Preliminary-Plat-PRD. For questions or further information on this project, please contact Senior Planner, Anita Marrero @ (360) 863-4513 or amarrero@monroewa.gov.

Thank you,
Kim

<image001.jpg> <image002.jpg> Kim Shaw, CPT | Land Use Permit Supervisor
806 West Main Street | Monroe, WA 98272
360-863-4532 / www.monroewa.gov

NOTE: This email is considered a public record and may be subject to public disclosure.

<Garibaldi DNS - Signed.pdf><SEPA Checklist_Garibaldi - Revised 11-15-2021.pdf><Site Plan.jpg>

From:	Larissa Stassek
To:	Anita Marrero
Subject:	Project PLPRD2018-02 Comments
Date:	Tuesday, April 20, 2021 9:45:29 PM

Dear Ms. Amerro,

I am writing in regard to Project PLPRD2018-02 (Garabaldi). I live at 13659 199th Ave SE, Monroe, WA 98272 (Eaglemont neighborhood).

First, I only now heard of this project today from a neighbor; the developer did not notify us directly via mail, as should be required as our property will be impacted. I am frustrated that we did not receive timely notification to allow us to look into this matter further.

Second, I would like to express deep concern about the plans:

1. The property is supposed to be R4 zoned, and it appears the builder would like to build 90 plots on 17.85 acres, which equates to about 5.2 units per acre. They should not be able to build more than 71 houses. This is too dense and should not be allowed.

2. The builder would be destroying a greenbelt wetland area, which is is known to be important habitat for wildlife. It is also valuable to the community in terms of aesthetics but also mental and physical (clean air, blood pressure) health.

3. There are already water pressure issues in this neighborhood that have been reported to the city and I doubt adding more properties to the hill would help with this. During an HOA meeting a neighbor indicated that the city would have to update the water system via a capital improvement project if the pressure dropped much further (I apologize as I do not recall the exact terminology or details; again, I have not received adequate time to research and respond to this plan).

4. These new houses will block views from the existing houses along 199th Ave SE, thus likely causing a decrease in our property value. That greenbelt was a major part of us buying our home and we were led to believe it could not be developed. We disagree with the developer's assertion that existing houses would not be impacted.

5. These properties do not appear to be very far setback from the existing properties on 199th Ave SE. This calls into question concerns about noise and drainage issues.

I would strongly urge the city to deny this application, or at the very least extend the commentary period to ensure all impacted residents have time to provide comment. I imagine ours is not the only household that has not received proper notification to-date.

Kind regards,
Larissa Stassek

From: Wicklund, Mary
To: Anita Marrero
Subject: PLPRD2018 02 Garibaldi PRD
Date: Friday, February 8, 2019 3:17:24 PM
Attachments: 201902081355.pdf

Please see attached.

Mary Wicklund
Planning, Engineering & Technical Services
Snohomish County Public Utility District
mlwicklund@snopud.com
425-783-4318

Public comments were received with the initial review of the Preliminary Subdivision and SEPA applications for the *Garibaldi PRD* project (PLPRD2018-02 / SEPA2018-13). These comments were provided in a consolidated into a single letter petition from the residents of the Eaglemont subdivision immediately west of the project. The following responses are provided along with each of the comments as received:

BACKGROUND

Neighboring Eaglemont community residents located on 199th Avenue SE (directly west and adjacent to the proposed development) purchased their property at an added premium for the enjoyment and investment appreciation of the sweeping view of the open pasture, forested foothills, and the Cascade mountain range. In addition to these aesthetic values, the close proximity of the adjacent open space provides solitude and a natural environment for horses, deer, coyotes, and other wildlife.

Response: The Garibaldi PRD site is an assemblage of private residential properties and is not open space nor does it currently contain any areas designated for public use. The properties that comprise the site all have a City zoning and comprehensive plan designation of Low Density Single-family Residential (R-4). The proposed single-family residential project is being developed under the vested PRD code. These comprehensive plan designations and PRD development standards were applied to the forested and pasture covered properties that comprise what is now the Eaglemont community throughout its phased development.

The Garibaldi PRD has been designed and will be developed in accordance with all applicable City standards and municipal codes for a PRD in the R-4 zone. This includes open space, lot dimensional standards, building heights, etc. consistent and compatible with those applied to the adjacent Eaglemont PRD. In its developed condition, the Garibaldi PRD site will provide significant areas of private park and open space for its residents—more than the minimum required by City code and in addition to the protected onsite wetland and stream areas.

VIEWS

SEPA Check List item 10.b.
"No views would be obstructed by the project, in part because the site is located at lower elevations on the existing sloped topography."

However, the views from adjacent Eaglemont properties will be significantly or totally blocked by the new construction. The platted lots along the west boundary of the proposed development are not at lower elevations on the existing sloped topography that would avoid view impact. Even with an excavation of 10 feet from the existing topography, the 35 feet maximum structure height will not prevent view obstruction. See attached Figures 1a, 1b, 2a, and 2b.

Response: There is an existing solid wood fence and a permanent perimeter landscaping tract located between the residential lots of the adjacent Eaglemont Division I subdivision and the west boundary of the Garibaldi site. That permanent perimeter buffer is managed and maintained by the Eaglemont homeowners association and was a required condition of the Eaglemont subdivision in order to develop its then heavily forested and pasture covered site adjacent to the lower density residential properties and farms that are now the subject of the Garibaldi PRD.

The PRD code provisions that are being applied to the Garibaldi PRD site are the same that the Eaglemont was and continues to be development under. The proposed grades of the Garibaldi PRD site along this common boundary are generally lower than the current condition and as much as 7 to 9 feet in some locations.

The response to Checklist Item 10.b has been revised to read: "The proposed single-family residential community will modify the current appearance of the site and may result in alteration of the views from

some portions or vantages of neighboring residential areas. The appearance of the site and alterations of existing views following development will be consistent with other adjacent and recently developed residential subdivisions that have been improved under the same City R-4 zoning and Planned Residential Development (PRD) code provisions and development standards. "

LIGHT

SEPA Check List item 11.a.
"Neighborhood lighting and vehicle headlights will produce some level of light or glare during non-daylight hours."

Eaglemont owners adjacent the proposed development do not currently experience vehicle lights shining through windows at the back of their homes, outdoor rooms, and bedrooms especially from approaching traffic on Road B. This adversely impacts their non-daylight quality of life including sleep and future home resale. See attached Figures 3a and 3b.

Response: The Garibaldi PRD has been designed and will be constructed in accordance with the applicable City development standards and municipal code provisions for its R-4, Low Density Residential Designation. These standards are consistent with those in-place and applied to develop the adjacent Eaglemont subdivision and other recent neighborhoods in the immediate vicinity of the site. The Eaglemont subdivision also includes a perimeter landscape tract adjacent to the west boundary of the site that provides additional separation of the existing residential homes and those homes and streets that will be created by the Garabaldi PRD.

SEPA Check List item 11.c.
"*Ambient lighting from adjacent single-family residences, street lights, and vehicle headlights from Chain Lake and local access roads in the vicinity of the site could potentially affect the proposal.*"

This also applies to Eaglemont owners adjacent the proposed development that do not currently experience disruptive ambient lighting from behind their homes where kitchens, dining spaces, living rooms, outdoor rooms, and bedrooms are located. This adversely impacts their quality of life including sleep and future home resale. Refer to attached Photo 1a.

Response: Response: The Garibaldi PRD has been designed and will be constructed in accordance with the applicable City development standards and municipal code provisions for its R-4, Low Density Residential Designation. These standards are consistent with those in-place and applied to develop the adjacent Eaglemont subdivision and other recent neighborhoods in the immediate vicinity of the site. The Eaglemont subdivision also includes a perimeter landscape tract adjacent to the west boundary of the site that provides additional separation of the existing residential homes and those homes and streets that will be created by the Garabaldi PRD.

EXHIBIT 10

DETERMINATION OF NON-SIGNIFICANCE (DNS)

File Number: SEPA 2018-13

Name of Proposal: Garibaldi Preliminary Plat/Planned Residential Development

Description of Proposal: The applicant is requesting preliminary plat and planned residential development approval for a 90-lot subdivision on approximately 17.85 acres in the Residential 4 Dwellings Per Acre (R4) zoning district with associated grading, drainage improvements, pedestrian facilities, landscaping, and street frontage improvements. There is a Category III wetland and unclassified stream onsite. The existing single-family residences and outbuildings will be demolished. The proposed development will take access off of Chain Lake Road.

Proponent: Garibaldi Lake, LLC
1010 Market Street
Kirkland, WA 98033

Location of Proposal: The site is located at 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, Washington, 98272. Snohomish County Tax Parcel Numbers: 28073100200800, 28073100201600, 28073100203900, 28073100202800, 28073100202900.

Lead Agency: City of Monroe

Threshold Determination: The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) IS NOT required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public for review upon request at Monroe City Hall, 806 West Main Street, Monroe, WA 98272 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays. The information is also available for view online at www.monroewa.gov/799/Garibaldi-Preliminary-Plat-PRD.

☐ There is no comment period for this DNS.
☐ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.
☒ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by **December 20, 2021.**

Responsible Official: Stacy Criswell, Interim Community Development Director
SEPA Responsible Official

(360) 863-4536
Monroe City Hall
806 West Main Street
Monroe, WA 98272
scriswell@monroewa.gov

Date: 12-1-2021 **Signature:** _____

Date of Issuance: December 6, 2021

Deadline for Submitting Comments: No later than 5:00 p.m. on December 20, 2021

Deadline for Appeals: No later than 5:00 p.m. on December 20, 2021

Appeals: You may appeal this determination to the City of Monroe Hearing Examiner at Monroe City Hall, which is located at 806 West Main Street, Monroe, WA 98272, no later than **5:00 p.m. on December 20, 2021**. You should be prepared to make specific factual objections; and you shall set forth the specific reason, rationale, and/or basis for the appeal. Appeals must be made in person on City appeal forms, which are available through the Community Development Department at Monroe City Hall. Appeals must be filed in original form in accordance with MMC Chapter 22.78.180. Payment of the appeal fee, as specified in the city's fee resolution, shall occur at the time the appeal is filed. Please contact Kim Shaw, Land Use Permit Supervisor, by email at KShaw@monroewa.gov or by phone at (360) 863-4532 to read or ask about the procedures for SEPA appeals.

Staff Contact: Questions about the proposal may be directed to Anita Marrero, Senior Planner, at amarrero@monroewa.gov or (360) 863-4513.

EXHIBIT 10-A

From: Leigh Anne Barr
To: Legal Advertising EDH
Cc: Kim Shaw
Subject: RE: [edh legals] City of Monroe DNS
Date: Thursday, December 2, 2021 11:13:23 AM

Hi Karen,

The proof looks good, thanks!

Leigh Anne Barr | Interim Associate Planner
806 West Main Street | Monroe, WA 98272
360-863-4511 | labarr@monroewa.gov

NOTE: This email is considered a public record and may be subject to public disclosure.

From: Legal Advertising EDH <legals@heraldnet.com>
Sent: Thursday, December 2, 2021 11:03 AM
To: Leigh Anne Barr <LABarr@monroewa.gov>
Subject: Re: [edh legals] City of Monroe DNS

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Leigh Anne,
Attached is the proof for Monday's notice.
Thank you,
Karen Cedarquist

Herald Legals
The Daily Herald | 1800 41st Street, S-300 | Everett, WA 98203
425-339-3100 | legals@heraldnet.com | www.heraldnet.com

Map Media Kit Sound Info

On Thu, Dec 2, 2021 at 9:33 AM Legal Advertising EDH <legals@heraldnet.com> wrote:

> Leigh Anne,
> I will schedule this notice to publish December 6, 2021.
> Thank you,
> Randie
>
> **Herald Legals**
> The Daily Herald | 1800 41st Street, S-300 | Everett, WA 98203
> 425-339-3100 | legals@heraldnet.com | www.heraldnet.com
>
> 
>
> 
>
> Map Media Kit Sound Info
>
> On Thu, Dec 2, 2021 at 9:05 AM Leigh Anne Barr <LABarr@monroewa.gov> wrote:
>
> > Good Morning,
> >
> > Please schedule the attached to publish on Monday 12/6/2021. Thank you.
> >
> > MONROE WASHINGTON THE ADVENTURE STARTS HERE!
> >
> > **Leigh Anne Barr, C.P.T | Permit Specialist**
> > 806 West Main Street | Monroe, WA 98272
> > 360-863-4511 | labarr@monroewa.gov
> >
> > NOTE: This email is considered a public record and may be subject to public disclosure.

CITY OF MONROE DETERMINATION OF NON-SIGNIFICANCE (DNS)
File Number: SEPA 2018-13 **Name of Proposal:** Garibaldi Preliminary Plat/Planned Residential Development **Description of Proposal:** The applicant is requesting preliminary plat and planned residential development approval for a 90-lot subdivision on approximately 17.85 acres in the Residential 4 Dwellings Per Acre (R4) zoning district with associated grading, drainage improvements, pedestrian facilities, landscaping, and street frontage improvements. There is a Category III wetland and unclassified stream onsite. The existing single-family residences and outbuildings will be demolished. The proposed development will take access off of Chain Lake Road. **Proponent:** Garibaldi Lake, LLC 1010 Market Street Kirkland, WA 98033 **Location of Proposal:** The site is located at 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, WA, 98272. Snohomish County Tax Parcel Numbers: 28073100200800, 28073100201600, 28073100203900, 28073100202800, 28073100202900. **Lead Agency:** City of Monroe **Threshold Determination:** The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) IS NOT required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public for review upon request at Monroe City Hall, 806 West Main Street, Monroe, WA 98272 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays. The information is also available for view online at www.monroewa.gov/799/Garibaldi-Preliminary-Plat-PRD. This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by December 20, 2021. **Responsible Official:** Stacy Criswell, Interim Community Development Director SEPA Responsible Official, (360) 863-4536, Monroe City Hall, 806 West Main Street Monroe, WA 98272, scriswell@monroewa.gov **Date of Issuance:** December 6, 2021 **Deadline for Submitting Comments:** No later than 5:00 p.m. on December 20, 2021 **Deadline for Appeals:** No later than 5:00 p.m. on December 20, 2021 **Appeals:** You may appeal this determination to the City of Monroe Hearing Examiner at Monroe City Hall, which is located at 806 West Main Street, Monroe, WA 98272, no later than 5:00 p.m. on December 20, 2021. You should be prepared to make specific factual objections; and you shall set forth the specific reason, rationale, and/or basis for the appeal. Appeals must be made in person on City appeal forms, which are available through the Community Development Department at Monroe City Hall. Appeals must be filed in original form in accordance with MMC Chapter 22.78.180. Payment of the appeal fee, as specified in the city's fee resolution, shall occur at the time the appeal is filed. Please contact Kim Shaw, Land Use Permit Supervisor, by email at KShaw@monroewa.gov or by phone at (360) 863-4532 to read or ask about the procedures for SEPA appeals. **Staff Contact:** Questions about the proposal may be directed to Anita Marrero, Senior Planner, at amarrero@monroewa.gov or (360) 863-4513.

EXHIBIT 10-B

AFFIDAVIT OF EMAILING NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624, 13424, 13704, 13802 **Chain Lake Rd. Monroe, WA. 98272**
Address

Determination of Non-Significance for Garibaldi Preliminary Plat – PLPRD2018-02/SEPA2018-13
Application Name and File #

I, Kim Shaw (print name) being first duly sworn on oath, depose and say: That on the 6th day of December, 2021, I emailed the **Determination of Non-Significance for Garibaldi Preliminary Plat – PLPRD2018-02/SEPA2018-13** to public agencies and interested parties of record. Attached is a list of names and addresses to whom this information was mailed to.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Kim Shaw
Signed

12/6/2021
Date

DNS EMAIL LIST FOR GARIBALDI PRELIMINARY PLAT/PRD

pspirito@sno-isle.org; lanthony@sno-isle.org; david.matulich@pse.com; john_warrick@cable.comcast.com; crenderlein@snopud.com; development.review@commtrans.org; Neilwheeler@comcast.net; piplicd@monroe.wednet.edu; SEPA@pscleanair.org; stevev@pscleanair.org; eip@parks.wa.gov; sposner@utc.wa.gov; kmclain@agr.wa.gov; reviewteam@commerce.wa.gov; sepadesk@dfw.wa.gov; efheinitz@doc1.wa.gov; sepacenter@dnr.wa.gov; randy.kline@parks.wa.gov; Stan.Allison@faa.gov; Karen.Wood-McGuiness@fema.dhs.gov; kjoseph@sauk-suiattle.com; njoseph@sauk-suiattle.com; jjoseph@sauk-suiattle.com; ryoung@tulaliptribes-nsn.gov; klyste@stillaguamish.com; pstevenson@stillaguamish.com; newstips@heraldnet.com; info@PPTValley.org; tom.laufmann@sno.wednet.edu; rooseveltwater@frontier.com; staff@highlandwaterdistrict.com; bewood@snopud.com; faye.ryan@pse.com; dan.o.olson@williams.com; shannon.fleming@snoco.org; mrobenland@doc1.wa.gov; rodrijr@dshs.wa.gov; ehquestions@snohd.org; Quinten.schmit@snoco.org; serviceaddresscorrec@pse.com; laura.blackmore@psp.wa.gov; wcr.nepa@noaa.gov; apellham@snohd.org; stephen.semenick@BNSF.com; David.McConnell@co.snohomish.wa.us; stephanie.jolivette@dahp.wa.gov; plattst@wsdot.wa.gov; AnderDM@wsdot.wa.gov; steve.roberge@commerce.wa.gov; scarpelliv@monroe.wednet.edu; knelson@tulaliptribes-nsn.gov; Mike Messer <mmesser@lsfire.org>; eidem@snohomishwa.gov; Ivkorslund@integrity.com; larissa.stassek@gmail.com; bjames32@hotmail.com; ppwwjones@gmail.com; Anita Marrero <AMarrero@monroewa.gov>; Leigh Anne Barr <LABarr@monroewa.gov>; R4Cplanning@dfw.wa.gov; jason.bowen@srfr.org

EXHIBIT 10-C

AFFIDAVIT OF MAILING DNS

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake Rd, Monroe, WA 98272
Address

Garibaldi Preliminary Plat SEPA2018-13
Application Name and File #

I, Leigh Anne Barr (print name) being first duly sworn on oath, depose and say: That on the 6th day of December, 2021, I mailed a copy with prepaid postage of the **Determination of Non-significance** to the interested party listed below.

Name	Address
Larry & Verna Korslund	13410 Chain Lake Road, Monroe 98272
Kevin & Sharlene Payne-Hankins	13593 199th Ave. SE, Monroe WA. 98272
Terry & Connie Jones	13605 199th Ave. SE, Monroe WA. 98272
Steven & Hsiaofang McDonald	13565 199th Ave. SE, Monroe WA. 98272
Massey Bhurgri	13547 199th Ave, SE, Monroe WA. 98272
Anesh & Preetika Pal	13627 199th Ave SE, Monroe WA. 98272

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

L. Barr
Signed

12/6/2021
Date

EXHIBIT 10-D

AFFIDAVIT OF POSTING DNS

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake Rd, Monroe, WA 98272
Address

Garibaldi Preliminary Plat SEPA2018-13
Application Name and File #

I, Leigh Anne Barr (print name) being first duly sworn on oath, depose and say: That on the **6th day of December, 2021,** I posted 1 notice in the City Hall lobby for the **Determination of Non-significance** and on the correct date of posting of said notice.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

L. Barr
Signed

12/6/2021
Date

EXHIBIT 11

City of Monroe
806 West Main Street, Monroe, WA 98272
Phone (360) 794-7400 Fax (360) 794-4007
www.monroewa.gov

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that a **PUBLIC HEARING** is scheduled to be held **Thursday, December 30, 2021 at 10:00 a.m.** by the **City of Monroe Hearing Examiner** via the virtual meeting platform, Zoom (information is listed below for access to the meeting) on the proposed **Garibaldi Preliminary Plat and Planned Residential Development.**

Location: Zoom Virtual Meeting
Please click the link below to join:
https://us02web.zoom.us/j/86772473016
Phone (253) 215-8782 Webinar ID: 867 7247 3016

PROJECT NAME: Garibaldi Preliminary Plat and Planned Residential Development

PROJECT FILE#: PLPRD2018-02 / SEPA2018-13

APPLICANT/OWNER Mark Donner, Garibaldi Lake, LLC,
1010 Market St., Kirkland, WA. 98033

PROJECT LOCATION: The site is located at 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, Washington, 98272. Snohomish County Tax Parcel Numbers: 28073100200800, 28073100201600, 28073100203900, 28073100202800, 28073100202900.

PROJECT DESCRIPTION: The applicant is requesting preliminary plat and planned residential development approval for a 90-lot subdivision on approximately 17.85 acres in the Residential 4 Dwellings Per Acre (R4) zoning district with associated grading, drainage improvements, pedestrian facilities, landscaping, and street frontage improvements. There is a Category III wetland and unclassified stream onsite. The existing single-family residences and outbuildings will be demolished. The proposed development will take access off of Chain Lake Road.

PUBLIC COMMENT PROCEDURE: Anyone wishing to comment on the above items or to provide other relevant information may do so in writing or appear in person before the Hearing Examiner at the time and place of said public hearing. The Hearing Examiner is required to issue a recommendation on this project pursuant to MMC 21.50.030(D). The Hearing Examiner's recommendation shall be forwarded to the City Council within 14 days of the recommendation being issued.

PUBLIC REVIEW OF DOCUMENTS: A copy of the application and supporting documents for the project are available for review on the city's website at: http://www.monroewa.gov/799/Garibaldi-Preliminary-Plat-PRD. A copy of the staff report will be available for review at City Hall seven (7) days prior to the hearing. Please contact Kim Shaw at (360) 863-4532 or kshaw@monroewa.gov for further assistance. Copies will be provided at cost.

STAFF CONTACT: Additional information may be obtained by contacting Anita Marrero, Senior Planner, @ (360) 863-4513 or amarrero@monroewa.gov.

EXHIBIT 11-A

Classified Proof

Client	EDH103247 - City Of Monroe	Phone	(360) 794-7400
Address	Attn: Kim Fogh, 806 W Main St	E-Mail	kfogh@monroewa.gov
	Monroe, WA, 98272	Fax	

Order#	945373	Requested By	KIM SHAW	Order Price	$76.50
Classification	8901 - EDH-WIDE-Public Notices	PO #	GARIBALDI LAKE	Tax 1	$0.00
Start Date	12/17/2021	Created By	1751	Tax 2	$0.00
End Date	12/17/2021	Creation Date	12/15/2021, 10:21:40 am	Total Net	$76.50
Run Dates	2			Payment	$0.00
Publication(s)	Everett Daily Herald, HeraldNet				

Sales Rep	1751 - Cedarquist, Karen	Phone	(425) 339-3095
		E-Mail	karen.cedarquist@soundpublishing.com
		Fax	(425) 339-3438

Classified Proof

CITY OF MONROE, WASHINGTON
NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that a PUBLIC HEARING is scheduled to be held Thursday, December 30, 2021 at 10:00 a.m. by the City of Monroe Hearing Examiner via the virtual meeting platform, Zoom (information is listed below for access to the meeting) on the proposed Garibaldi Preliminary Plat and Planned Residential Development.

Location: Zoom Virtual Meeting
Please click the link below to join:
https://us02web.zoom.us/j/86772473016
Phone (253) 215-8782 Webinar ID: 867 7247 3016

PROJECT NAME: Garibaldi Preliminary Plat and Planned Residential Development
PROJECT FILE#: PLPRD2018-02 / SEPA2018-13
APPLICANT/OWNER Mark Donner, Garibaldi Lake, LLC, 1010 Market St., Kirkland, WA. 98033

PROJECT LOCATION: The site is located at 13624, 13424, 13704, and 13802 Chain Lake Road, Monroe, Washington, 98272. Snohomish County Tax Parcel Numbers: 28073100200800, 28073100201600, 28073100203900, 28073100202800, 28073100202900.

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PUBLIC REVIEW OF DOCUMENTS: A copy of the application and supporting documents for the project are available for review on the city's website at: http://www.monroewa.gov/799/Garibaldi-Preliminary-Plat-PRD. A copy of the staff report will be available for review at City Hall seven (7) days prior to the hearing. Please contact Kim Shaw at (360) 863-4532 or kshaw@monroewa.gov for further assistance. Copies will be provided at cost.

STAFF CONTACT: Additional information may be obtained by contacting Anita Marrero, Senior Planner, @ (360) 863-4513 or amarrero@monroewa.gov.

Published: December 17, 2021. EDH945373

EXHIBIT 11-B

AFFIDAVIT OF MAILING
NOTICE OF PUBLIC HEARING

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake Rd. Monroe WA 98272
Address

Garibaldi Preliminary Plat PLPRD2018-02
Application Name and File #

I, Kim Shaw (print name) being first duly sworn on oath, depose and say: That on **the 15th day of December, 2021,** I made application with Click2Mail to mail on **December 16th, 2021** a copy with prepaid postage of the **Notice of Public Hearing for Garibaldi Preliminary Plat/PRD.** Attached is a list of names and addresses to whom this information was mailed to.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Kim Shaw
Signed

12/15/2021
Date

Taxpayer	Address	City	State	Zip Code
ALTAYAR MOHANNAD	19827 137TH ST SE	MONROE	WA	98272
BACON ROBERT B & JANET B	14311 KENWANDA DR	SNOHOMISH	WA	98296
BALLINGER COMMERCIAL PROPERTIES LLC	13582 CHAIN LAKE RD	MONROE	WA	98272
BALOCH TASNEEM	13643 198TH AVE SE	MONROE	WA	98272
BECKER GERALDINE LOUISE	9505 NE 13TH ST	BELLEVUE	WA	98004
BECKLEY ALAN M/BECKLEY KARA N	13811 CHAIN LAKE RD	MONROE	WA	98272
BEWICK KENNETH ALLEN & PAULA ANN	13633 198TH AVE SE	MONROE	WA	98272
BHARDWAJ MANUJ/PRIYA	19817 137TH ST SE	MONROE	WA	98272
BHURGRI MASIULLAH/AYESHA	13547 199TH AVE SE	MONROE	WA	98272
BRIDWELL NELSON/DARBY BRIDWELL ROBIN	19869 136TH PL SE	MONROE	WA	98272
BRODY COURTNEY H/MOSHIER MARIANNE T	13539 204TH DR SE	MONROE	WA	98272
BRUNSMAN WILLIAM A	19841 136TH PL SE	MONROE	WA	98272
BUENROSTRO-PEREZ ARIANA G	13860 CHAIN LAKE RD	MONROE	WA	98272-7700
BURCH JOHN & SHELLY	PO BOX 267	TWISP	WA	98856
CAURON JESUS ANDRES/ PIMIPINATO RAFAEL	13428 204TH DR. SE	MONROE	WA	98272
CAVALCANTE FABIO V/JESSICA M	19883 137TH ST SE	MONROE	WA	98272
CHONG YOUNG SHIN	13612 199TH AVE SE	MONROE	WA	98272
CHRISTIAN GUADALUPE M/CHRISTOPHER	20341 135TH PL SE	MONROE	WA	98272
CHRISTOPHER STEPHEN T/MELISSIA B	13628 199TH AVE SE	MONROE	WA	98272
CLARK SHELDON/MARCELA	19855 137TH ST SE	MONROE	WA	98272
CLOTHIER MICHAEL & SHANNA	27419 118TH ST SE	MONROE	WA	98272-9506
COVELLI ENRIQUE/VELEZ SANZ MARTHA E	20334 135TH PL SE	MONROE	WA	98272
CROWLY RITA A/ ROBERT BRUCE	13876 CHAIN LAKE RD	MONROE	WA	98272
DAHLGREN JOHN/KATHLEEN	19813 135TH ST SE	MONROE	WA	98272
DEGTYAREV GEORGIY & SVETLANA	19844 135TH ST SE	MONROE	WA	98272
DENTON WARREN K/ZAIDAH	19841 137TH ST SE	MONROE	WA	98272
EAGLEMONT HOA	16531 13TH AE W #A107	LYNNWOOD	WA	98037
EAGLEMONT HOMEOWNER'S ASSOCIATION	524 SECOND AVE STE 500	SEATTLE	WA	98104
EASTON COVE HOMEOWNERS ASSOCIATION	8201 164TH AVE NE STE 200	REDMOND	WA	98052
ECHELBARGER ERIC/ANKLEY CRYSTAL	13679 199TH AVE SE	MONROE	WA	98272
ECKELAMP-WOOD RICHARD/CRESON DANIELLE	13671 198TH AVE SE	MONROE	WA	98272
ELMUGHRABI AMER O/ABULBASAL FARAH	19797 135TH ST SE	MONROE	WA	98272
ENGELS JOHN A/ JANELL	13701 199TH AVE SE	MONROE	WA	98272
ESPINOZA CARSON	13618 199TH AVE SE	MONROE	WA	98272
FARINELLA LUKE/FLEET FARINELLA MELODY	1327 204TH DR. SE	MONROE	WA	98272
FONG CATHERINE	PO BOX 365	ISSAQUAH	WA	98027
FOSTER CHRISTINA H	14327 123RD AVE NE UNIT C	KIRKLAND	WA	98034
FRANCO DALILA & OMAR	14617 CHAIN LAKE RD	MONROE	WA	98272-9793
GARIBALDI LAKE LLC	1010 MARKET ST	KIRKLAND	WA	98033
GILLON JESSICA R & ERIC R	13230 CHAIN LAKE RD	MONROE	WA	98272
GRANT BRIAN & LINDA	13304 CHAIN LK RD	MONROE	WA	98272
GRIFFIN RICHARD DALE	13305 CHAIN LAKE RD	MONROE	WA	98272
GRUMMONS JEFFREY A/DEANA M	19798 137TH ST SE	MONROE	WA	98272
GUTHA THULASIRAM/GAYATHRI	20312 135TH PL SE	MONROE	WA	98272
HANKINS KEVIN & SHARLENE	13593 199TH AVE SE	MONROE	WA	98272
HARP ROBERT K & DENISE	13704 CHAIN LAKE RD	MONROE	WA	98272-8760
HAZELWOOD PATRICK T/MONICA	19816 135TH ST SE	MONROE	WA	98272
HEATH BRITT	13252 NE 47TH ST	BELLEVUE	WA	98005
HELMAN JEFFREY/ DEBORAH	19862 135TH ST SE	MONROE	WA	98272
HENDRICKS RANDEN/PAULA	13205 CHAIN LK RD	MONROE	WA	98272
HENKE DAWN V/RYAN M	13623 198TH AVE SE	MONROE	WA	98272
HESS JAMES RICHARD & EDITH FRANCIS	PO BOC 693	SULTAN	WA	98294
HILL KAY C TTEE	13424 205TH AVE SE	MONROE	WA	98272-7769
HOHENSTEIN DEREK A/JENNIFER L	13907 CHAIN LAKE RD	MONROE	WA	98272

IENG KELVIN/TRUONG BRIANNA	20340 135TH PL SE	MONROE	WA	98272
JAGNE SULAYMAN	13768 199TH AVE SE	MONROE	WA	98272
JAMES BRYAN SCOTT & BRIDGET CATHLEEN	13579 199TH AVE SE	MONROE	WA	98272
JEFFERIES PHILIP T/LEWIS LANCE W	13443 204TH DR SE	MONROE	WA	98272
JONES GRIFFEN G/JONES IVY	13455 204TH DR. SE	MONROE	WA	98272
JONES PAUL & COLLETTE	13617 199TH AVE SE	MONROE	WA	98272
JONES TERRY/CONNIE	13605 199TH AVE SE	MONROE	WA	98272
JYOTI RISHI\ THIRTHA RASHMI	13796 199TH AVE SE	MONROE	WA	98272
KAMOJWALA V/VADIYALA SHIRISHA	13483 204TH DR SE	MONROE	WA	98272
KANSARA MEHUL/NISHA	9979 242ND WAY NE	REDMOND	WA	98053
KBHPNW LLC	320 120TH AVE NE SUITE 202	BELLEVUE	WA	98005
KESTREL RIDGE 27 LLC	15 LAKE BELLEVUE DR. SUITE 102	BELLEVUE	WA	98005
KORSLUND JOSEPH M	13414 CHAIN LAKE RD	MONROE	WA	98272
KORSLUND LARRY JO & VERNA L	13410 CHAIN LAKE RD	MONROE	WA	98272-7703
KUMAR GANDHAM KIRTHI/NAMRATHA	13419 204TH DR. SE	MONROE	WA	98272
KUMAR PRASHANT V/ ANJANI	13669 199TH AVE SE	MONROE	WA	98272
LINTON JAMISON G	11801 97TH LN NE B051	KIRKLAND	WA	98034
LONG JEFFERY/MARVIS	19842 136TH PL SE	MONROE	WA	98272
LUONG LIEM T	13659 198TH AVE SE	MONROE	WA	98272
LUPASCU SIMION/LUNGU DOINA	13647 199TH AVE SE	MONROE	WA	98272
MACCAUL ROBERT/JOANN	19852 137TH ST SE	MONROE	WA	98272
MACDONALD STEVEN L/HSIAOFANG	13565 199TH AVE SE	MONROE	WA	98272
MADDEX TIMOTHY E	13316 CHAIN LAKE RD	MONROE	WA	98272-7703
MAINVUE WA LLC	1110 112TH AVE NE SUITE 202	BELLEVUE	WA	98004
MAMIYA KATSUMI/HIROKA	1370 116TH AVE NE STE 201	BELLEVUE	WA	98004
MANZIONE LISA M	13613 198TH AVE SE	MONROE	WA	98272
MARCELLIN MICHELLE	19838 137TH ST SE	MONROE	WA	98272
MONROE CITY OF	806 W MAIN ST	MONROE	WA	98272
NASIN KHALID	19876 135TH ST SE	MONROE	WA	98272
NEVILLE MICHELLE	13724 199TH AVE SE	MONROE	WA	98272
OTTEY HERBERT/GRACE	19824 137TH ST SE	MONROE	WA	98272
PAKALAPATI RAMA KRISHNAM RAJU/BINDU M	13670 199TH AVE SE	MONROE	WA	98272
PAL ANESH/PREETIKA	13627 199TH AVE SE	MONROE	WA	98272
PECKHAM SHAWN /LAURA J	13420 204TH DR. SE	MONROE	WA	98272
PETROX MAKSYM $ SAVVA KSENIYA	13593 199TH AVE SE	MONROE	WA	98272
PETTY DAVID/LAURIE	13656 199TH AVE SE	MONROE	WA	98272
PRASAD SWASTHA/RANJANA NEELAM	19855 136TH PL SE	MONROE	WA	98272
PRIKHODKO SERGEY/YELENA	19871 137TH ST SE	MONROE	WA	98272
RABADAN EUTIQUIO TERAN	13868 CHAIN LAKE RD	MONROE	WA	98272-7700
ROE DAWN LEE	13471 204TH DR SE	MONROE	WA	98272
ROMANYUK ANITA/ ALEXANDER	13232 CHAIN LAKE RD	MONROE	WA	98272
SAMPAT SUMIT K/BHAVANA SUMIT	19868 137TH ST SE	MONROE	WA	98272
SAMY KAUSALYA R K/DUPPANAPUDI S	20356 135TH PL SE	MONROE	WA	98272
SCHENCK GARY/ JANA	13689 199TH AVE SE	MONROE	WA	98272
SCHRADER JASON ANDREW/TERRA	20315 135TH PL SE	MONROE	WA	98272
SEVERSON DEBORAH/DALE	19835 135TH ST SE	MONROE	WA	98272
SHAW JEFFREY	19885 136TH PL SE	MONROE	WA	98272
SIMPSON LISA	13746 199TH AVE SE	MONROE	WA	98272
SINCLAIR HEIGHTS HOA	16030 JUANITA-WOODINVILLE WAY NE	BOTHELL	WA	98011
STASSEK LARISSA M/HONSE JEFFREY P	13659 199TH AVE SE	MONROE	WA	98272
STASSEK LARISSA M/HONSE JEFFREY P	9922 NE 116TH STREET UNIT 311	KIRKLAND	WA	98034
STOCKERT JUSTIN T	13773 CHAIN LAKE RD	MONROE	WA	98272
STUTZ JON JUSTUS & BONNIE JEAN	13422 205TH AVE SE	MONROE	WA	98272-7769
SUSCHIK MICHAEL/ TAMARA	13290 CHAIN LAKE RD	MONROE	WA	98272
TAUNT DAYLON/PENMAN JAMES	19812 137TH ST SE	MONROE	WA	98272

UDOM KHAM	20323 135TH PL SE	MONROE	WA	98272
UPTON KEITH P/WEBER CHRISTOPHER AARON	13525 204TH DR SE	MONROE	WA	98272
VALERA VAZQUEZ GILBERTO/JUAN/LUIS	13819 CHAIN LAKE RD	MONROE	WA	98272
WATSON GLENNA A	19890 135TH ST SE	MONROE	WA	98272
WESTFAHL JEFFREY J/CORINA O	14751 N KELSEY ST STE 105-516	MONROE	WA	98272
WEYHRAUCH CHAD W/BRENDA	19797 136TH PLACE SE	MONROE	WA	98272
WITMER LORIE	19811 136TH PL SE	MONROE	WA	98272
ZAKARIYA BOUTAYNA/BENNIS ABDELMAJID	13637 199TH AVE SE	MONROE	WA	98272
ZHANG XIANRONG	19798 135TH ST SE	MONROE	WA	98272
ZOBELL SHELDON J/ELLEN SHERRI	13704 199TH AVE SE	MONROE	WA	98272

EXHIBIT 11-C

AFFIDAVIT OF POSTING
NOTICE OF PUBLIC HEARING

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake Rd., Monroe WA., 98272
Project Address

Garibaldi Preliminary Plat/PRD #PLPRD2018-02
Application Name and File #

I, Kim Shaw (print name) being first duly sworn on oath, depose and say: That on the **17th day of December, 2021,** I posted 1 notice in the City Hall lobby for the **Notice of Public Hearing for Garbaldi Preliminary Plat** and on the correct date of posting of said notice.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Kim Shaw
Signed

December 22, 2021
Date

EXHIBIT 11-D

MONROE
WASHINGTON

AFFIDAVIT OF POSTING (ON SITE) NOTICE OF PUBLIC HEARING

STATE OF WASHINGTON)

COUNTY OF SNOHOMISH)

13624 Chain Lake Rd., Monroe WA 98272
Address

Garibaldi Preliminary Plat/PRD #PLPRD2018-02
Application Name and File #

I, John Axtman (print name) being first duly sworn on oath, depose and say: That on **the 17th day of December, 2021,** I posted one 1 sign for the **Notice of Public Hearing for Garibaldi Preliminary Plat/PRD** on or near the property concerned, in a conspicuous place; and on the correct date of posting of said notice.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

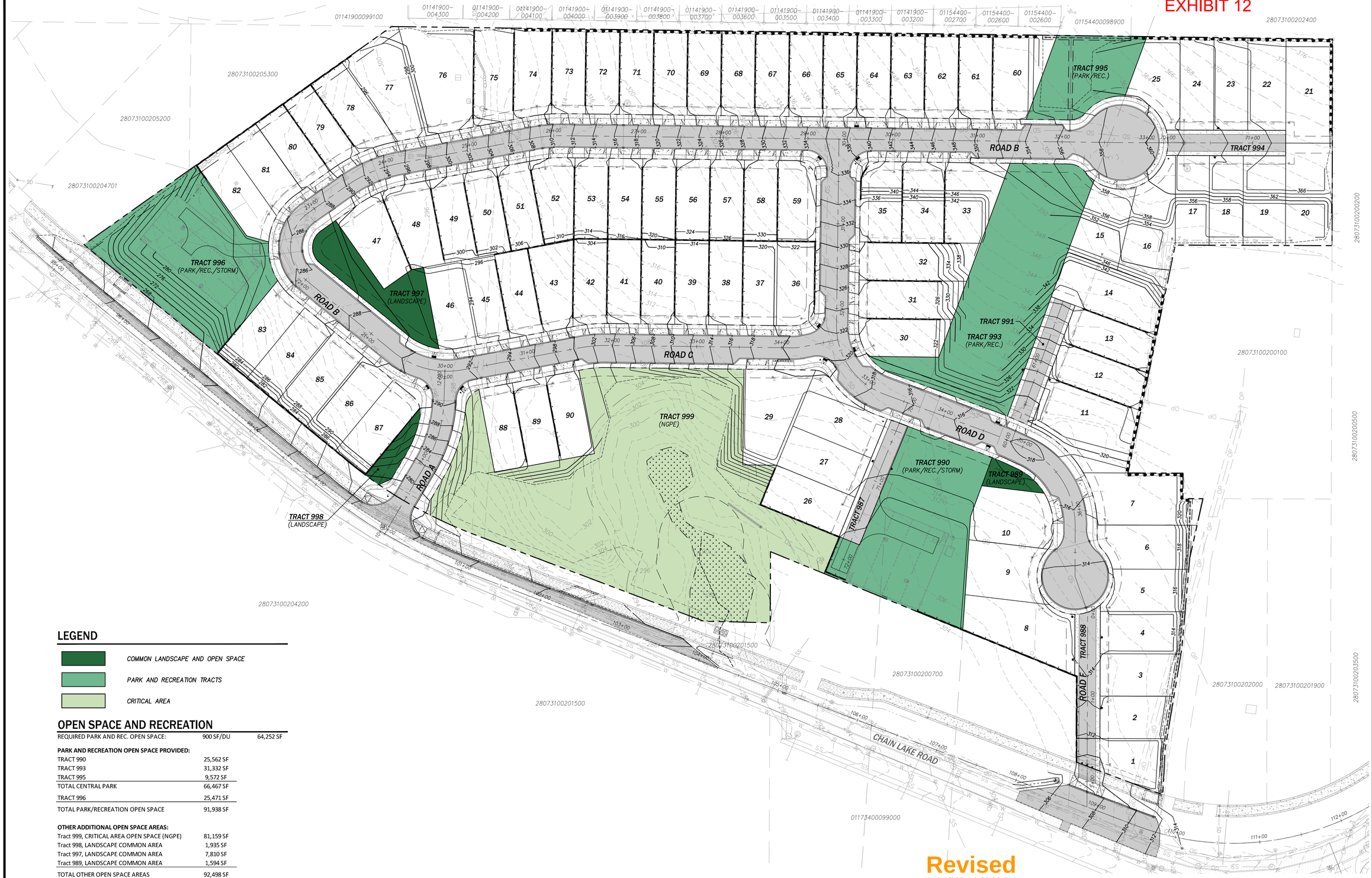
John Axtman
Signed

12-17-21
Date

OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

EXHIBIT 12



LEGEND

- COMMON LANDSCAPE AND OPEN SPACE
- PARK AND RECREATION TRACTS
- CRITICAL AREA

OPEN SPACE AND RECREATION

REQUIRED PARK AND REC. OPEN SPACE:	900 SF/DU	64,252 SF
PARK AND RECREATION OPEN SPACE PROVIDED:		
TRACT 990	25,562 SF	
TRACT 993	31,332 SF	
TRACT 995	9,572 SF	
TOTAL CENTRAL PARK	66,467 SF	
TRACT 996	25,471 SF	
TOTAL PARK/RECREATION OPEN SPACE	91,938 SF	
OTHER ADDITIONAL OPEN SPACE AREAS:		
Tract 999, CRITICAL AREA OPEN SPACE (NGPE)	81,159 SF	
Tract 998, LANDSCAPE COMMON AREA	1,935 SF	
Tract 997, LANDSCAPE COMMON AREA	7,810 SF	
Tract 989, LANDSCAPE COMMON AREA	1,594 SF	
TOTAL OTHER OPEN SPACE AREAS	92,498 SF	
TOTAL PARK/RECREATION OPEN SPACE	184,436 SF	4.23 AC

NOTE: SEE LANDSCAPE PLANS FOR PARK AND RECREATION AREA PLANTING AND AMENITY DETAILS.

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MATTHEW J. HEDSTROM — 18487 — REGISTERED PROFESSIONAL ENGINEER — 11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PARK, RECREATION AND OPEN SPACE PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
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PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

10' TYPE II BUFFER

SEE SHEET L1.03-1

SEE SHEET L1.02

SEE SHEET L1.01

SEE SHEET L1.05

SEE SHEET L1.04

SEE SHEET L1.03-2

PLAY AREA

WALKING PATH

CHAIN LAKE RD

TRACT 994

TRACT 995
PARK REC.

TRACT 996
OPEN SPACE

TRACT 993
PARK REC./STORM

TRACT 991

TRACT 987

TRACT 999
(NGPE)

TRACT 988

NOTE: FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10

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1 OVERALL LANDSCAPE PLAN
SCALE: 1" = 50'-0"

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STATE OF WASHINGTON
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LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 439

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

OVERALL LANDSCAPE PLAN

CITY OF MONROE SNOHOMISH COUNTY, WA

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L1.00

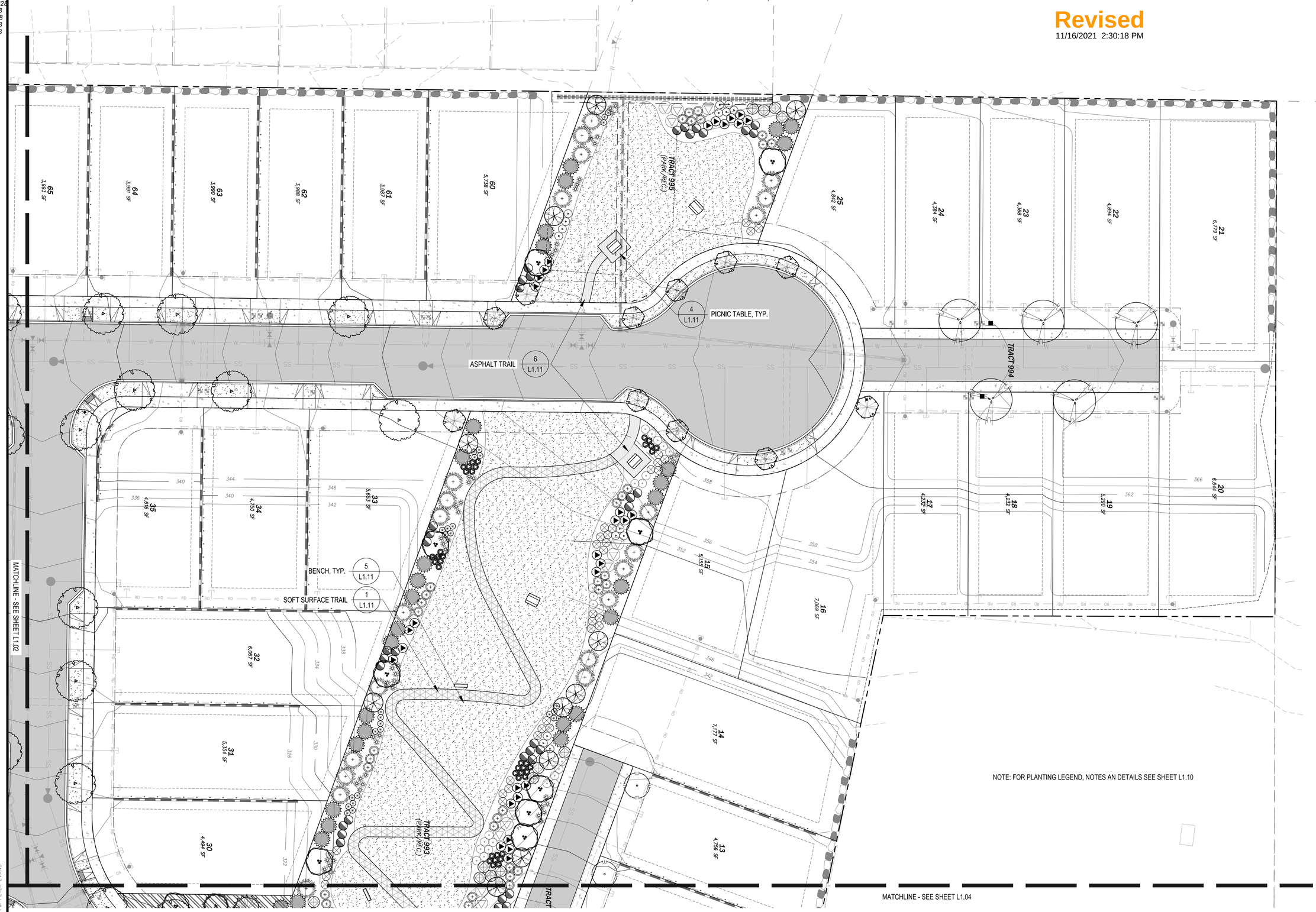
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1 LANDSCAPE ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
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N

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LANDSCAPE ENLARGEMENT PLAN

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NOTE: FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10

1 LANDSCAPE ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

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LANDSCAPE ENLARGEMENT PLAN

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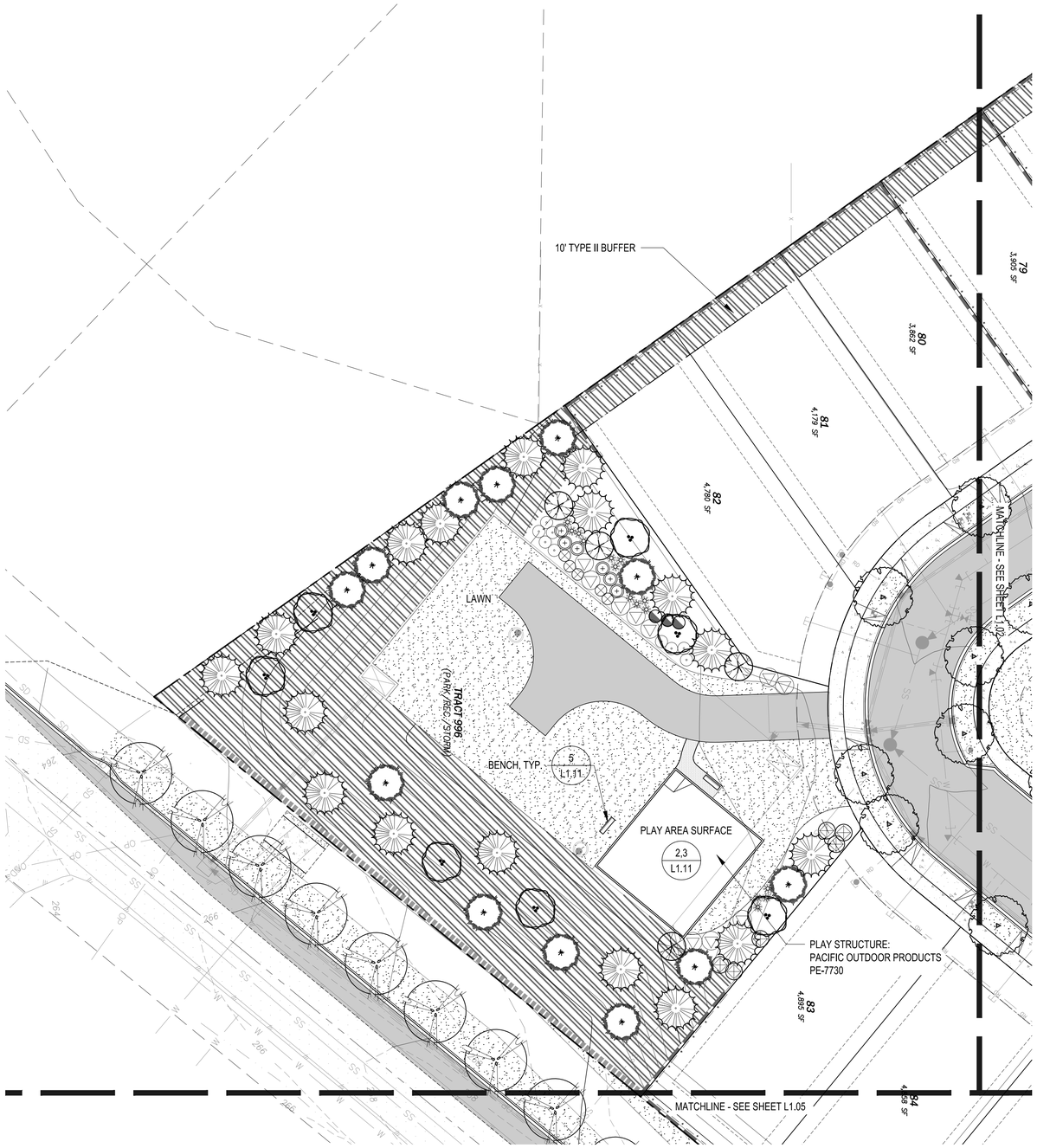
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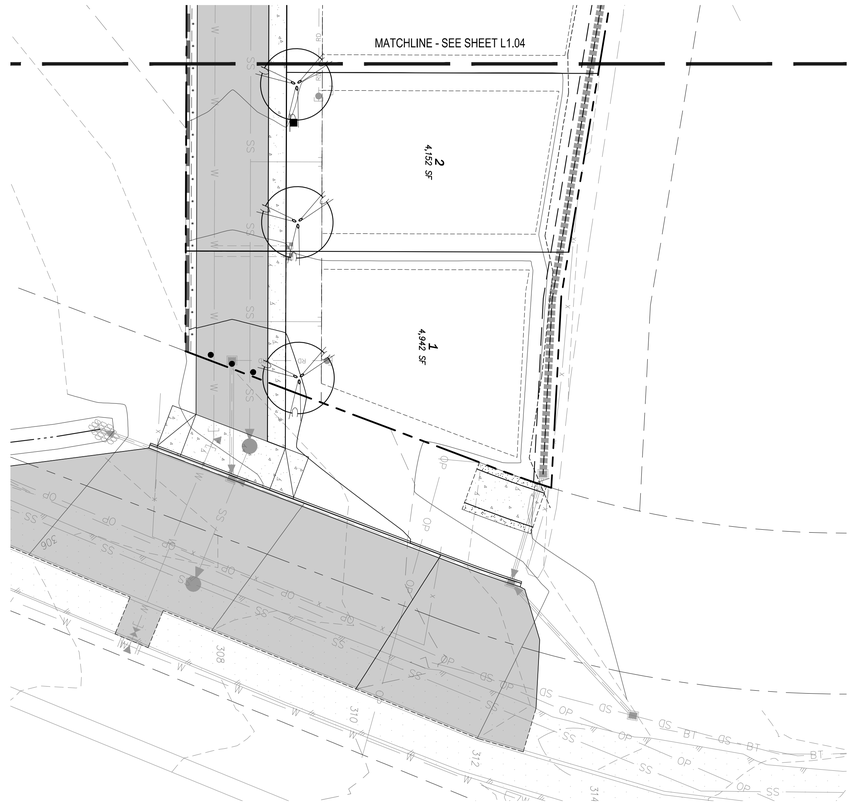
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1 ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

NOTE: FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10



2 ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

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MATCHLINE - SEE SHEET L1.02

MATCHLINE - SEE SHEET L1.01

MATCHLINE - SEE SHEET L1.05

MATCHLINE - SEE 2/L1.03

TRACT 999 (NGPE)

TRACT 987

TRACT 990 (PARK/REC/STORM)

TRACT 988

TRACT 999 (NGPE)

BENCH, TYP. 5 L1.11

PICNIC TABLE, TYP. 4 L1.11

BENCH, TYP.

STAIRWAY: TIMBER OR LANDSCAPE BLOCK W/ RAILING

1 L1.11 SOFT SURFACE PATH

7 L1.11 CHAINLINK FENCE

6 L1.11 ASPHALT PATH

8 L1.11 SPORT COURT

29 7,033 SF

28 5,784 SF

27 5,000 SF

26 5,008 SF

10 5,996 SF

9 5,689 SF

8 7,892 SF

12 5,657 SF

11 9,281 SF

7 7,181 SF

6 5,501 SF

5 4,629 SF

4 4,892 SF

3 4,559 SF

NOTE: FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10

100' PSE FUTURE TRANSMISSION ESMT.

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SHEET 19 OF 25

1 LANDSCAPE ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

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NOTE: RECREATION STRUCTURES SHOWN WITHIN THE EXISTING PSE FUTURE TRANSMISSION EASEMENT AREA MAY BE SUBJECT TO PSE APPROVAL.

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NOTE: FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10

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1 LANDSCAPE PLAN
SCALE: 1" = 20'-0"

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GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

LANDSCAPE ENLARGEMENT PLAN

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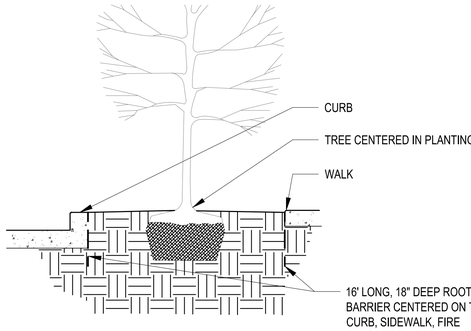
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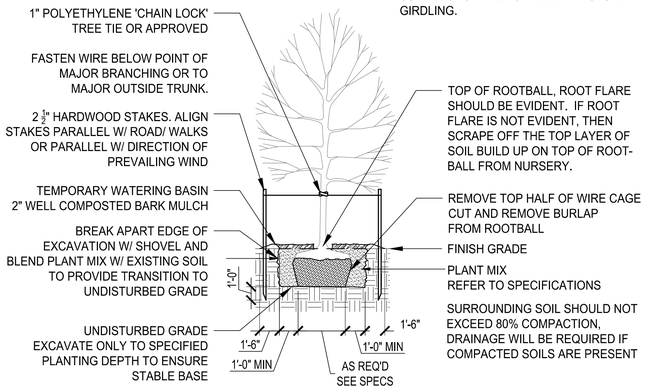
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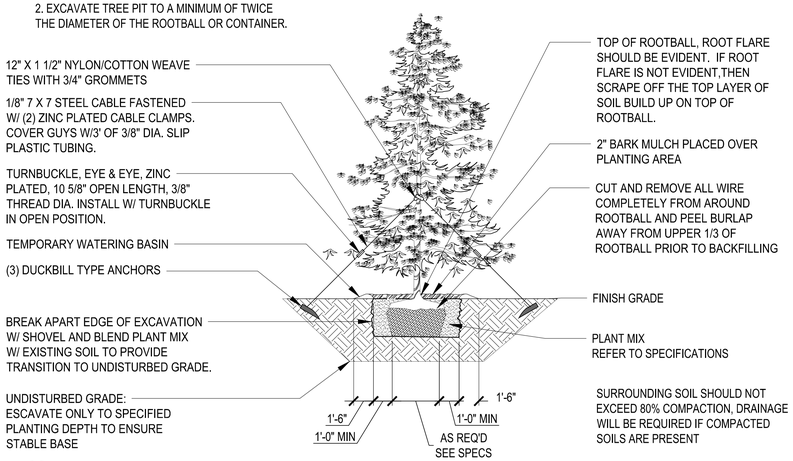
1 ROOT BARRIER
SCALE: NTS

NOTE: EXAMINE ENTIRE TREE AND REMOVE ALL NURSERY TAGS, ROPE, STRING, OR SURVEYORS TAPE TO PREVENT FUTURE GIRDLING.



2 DECIDUOUS TREE PLANTING
SCALE: NTS

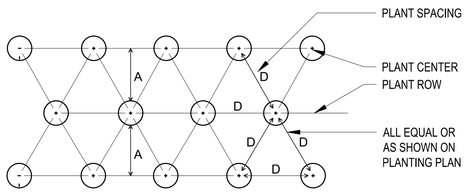
NOTES:
1.EXAMINE ENTIRE TREE AND REMOVE ALL NURSERY TAGS, ROPE, STRING, OR SURVEYORS TAPE TO PREVENT FUTURE GIRDLING.
2. EXCAVATE TREE PIT TO A MINIMUM OF TWICE THE DIAMETER OF THE ROOTBALL OR CONTAINER.



3 EVERGREEN TREE PLANTING
SCALE: NTS

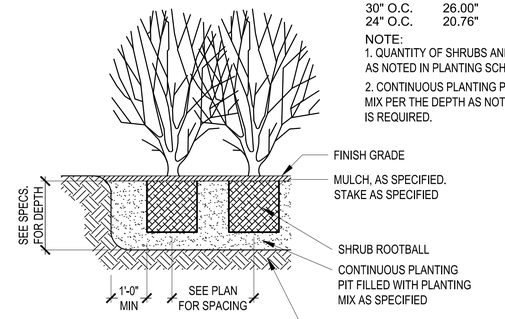
PLANTING NOTES

1. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER THE CONTRACT DOCUMENTS AND SPECIFICATIONS, AND PER CITY OF MONROE STANDARDS.
2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE GENERAL CONTRACTOR AND IF NECESSARY OTHER SUB CONTRACTORS AS REQUIRED TO ACCOMPLISH PLANT MATERIAL INSTALLATION.
3. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO STARTING WORK.
4. ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY AMERICANHORT. ALL TREES AND SHRUBS OF THE SAME SPECIES AND SIZE SHALL HAVE MATCHING HEIGHT AND FORM UNLESS OTHERWISE NOTED ON THE PLANS.
5. CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN IN THE CONTRACT DOCUMENTS. DISCREPANCIES IN QUANTITIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER IMMEDIATELY.
6. CONTRACTOR SHALL FURNISH PLANT MATERIAL FREE OF PESTS OR PLANT DISEASES. PRESELECTED OR "TAGGED" MATERIAL MUST BE INSPECTED BY THE CONTRACTOR AND CERTIFIED PEST AND DISEASE FREE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO WARRANTY ALL PLANT MATERIAL BASED ON THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING HARDSCAPE OR SOFTSCAPE MATERIALS DAMAGED DURING PLANTING OPERATIONS.
8. ALL LANDSCAPE AREAS SHALL RECEIVE 2" SETTLED DEPTH OF ORGANIC BARK MULCH THROUGHOUT. HAND DETAIL BY REMOVING EXCESS OR ACCUMULATED MULCH FROM AROUND THE BASE OF ALL PLANTS.
10. ALL NEW LANDSCAPE AREAS TO RECEIVE IMPORT TOPSOIL (PACIFIC TOPSOILS WINTER MIX OR APPROVED). LAWN AREAS – 6" COMPACTED DEPTH, SHRUB/GROUNDCOVER AREAS 4" COMPACTED DEPTH. TILL SUBGRADE TO 4" DEPTH PRIOR TO PLACING IMPORT TOPSOIL.
11. SOIL TO BE 8-13% ORGANIC CONTENT BY WEIGHT, pH 5.5-7.5.
12. ALL LANDSCAPE AREAS SHALL CONFORM TO CITY OF MONROE REQUIREMENTS.
13. STREET TREES SELECTED FROM CITY OF MONROE STREET TREE LIST.
14. PROVIDE ROOT BARRIER FOR ALL STREET TREES AND TREES PLANTED WITHIN 10' OF PUBLIC WALKWAYS, DRIVEWAY APPROACHES, WATER METERS, AND FIRE HYDRANTS. ROOT BARRIER TO BE 'DEEP ROOT' OR APPROVED EQUAL, AND AT LEAST 18 INCHES DEEP AND 16 FEET LONG. TO BE INSTALLED PERPENDICULAR TO THE CURB AND SIDEWALK AS WELL AS ALONG BACK OF CURB AND FRONT OF SIDEWALK TO FORM A CONTINUOUS BARRIER AGAINST ROOT INTRUSION INTO OR UNDERNEATH THESE FACILITIES.



SPACING "D"	ROW "A"	NUMBER OF PLANTS/SQ. FT.
5' O.C.	51.96"	0.04
4' O.C.	41.52"	0.07
36" O.C.	31.20"	0.12
30" O.C.	26.00"	0.18
24" O.C.	20.76"	0.28

NOTE:
1. QUANTITY OF SHRUBS AND SPACING AS NOTED IN PLANTING SCHEDULE.
2. CONTINUOUS PLANTING PITS FILLED WITH PLANTING MIX PER THE DEPTH AS NOTED IN THE SPECIFICATIONS IS REQUIRED.



4 EVERGREEN TREE PLANTING
SCALE: NTS

PLANTING LEGEND

SYMBOL		BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
STREET TREES						
		Parrotia persica	*Persian Parrotia*	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
		Fraxinus oxycarpa	*Raywood Ash*	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
		Acer platanoides 'Crimson Sentry'	*Crimson Sentry Maple*	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
	*	Fraxinus pennsylvanica 'Johnson'	*Leprechaun Ash*	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
DECIDUOUS TREES						
	*	Acer circinatum	*Vine Maple*	2" cal.		
		Acer macrophyllum	*Bigleaf Maple*	2" cal.		
	*	Amelanchier alnifolia	*Serviceberry*	2" cal.		
EVERGREEN TREES						
		Pseudotsuga menziesii	*Douglas Fir*	8'-10' ht.		
		Thuja plicata	*Western Redcedar*	8'-10' ht.		
	*	Chamaecyparis obtusa	*Hinoki Cypress*	8'-10' ht.		
	*	Pinus densiflora 'Umbraculifera'	*Tanyosho Pine*			
SHRUBS						
	*	Myrica californica	*Pacific Wax Myrtle*	5 gal.	As Shown	Evergreen
	*	Mahonia aquifolium	*Oregon Grape*	5 gal.	As Shown	Evergreen
	*	Polystichum munitum	*Sword Fern*	2 gal.	As Shown	Herbaceous
	*	Vaccinium ovatum	*Evergreen Huckleberry*	2 gal.	As Shown	Evergreen
	*	Ribes sanguineum	*Red Flowering Currant*	5 gal.	As Shown	Deciduous
	*	Symphoricarpos albus	*Snowberry*	5 gal.	As Shown	Deciduous
	*	Rosa rugosa	*Rugosa Rose*	5 gal.	As Shown	Deciduous
	*	Choisya ternata 'Sundance'	Mexican Orange	5 gal.	As Shown	Evergreen
		Berberis darwinii	*Darwin's Barberry*	5 gal.	As Shown	Deciduous
	*	Viburnum tinus 'Spring Bouquet'	*Laurustinus*	5 gal.	As Shown	Evergreen
	*	Ceanothus 'Puget Blue'	*California Lilac*	5 gal.	As Shown	Evergreen
		NATIVE PLANT AREA	¼ Sword Fern, ¼ Salal, ¼ Snowberry, ¼ Oregon Grape	1 gal.	5' o.c., planted in groups of 12-15	
GROUNDCOVERS						
		LAWN				
		Arctostaphylos uva ursi	*Kinnikinnick*	1 gal.	18" O.C. TRIANGULAR SPACING	

* Plants allowed in C Zone of 230 kv transition border zones per PSE Energy Landscaping Guide.

Revised
11/16/2021 2:30:50 PM

NO.	DATE	REVISION	BY
1	11/12/21	PRELIMINARY PRD RESUBMITTAL	PCE
			CK. MJH

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 439

GARIBALDI PRD
PRELIMINARY SUBDIVISION AND PRD APPLICATION
PLANTING LEGEND, NOTES AND DETAILS
CITY OF MONROE SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
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101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

PROJECT NO.
0054-18-028

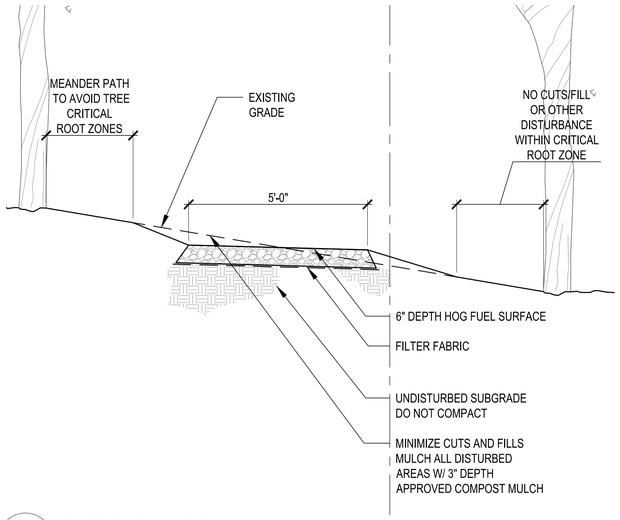
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SHEET 21 OF 25

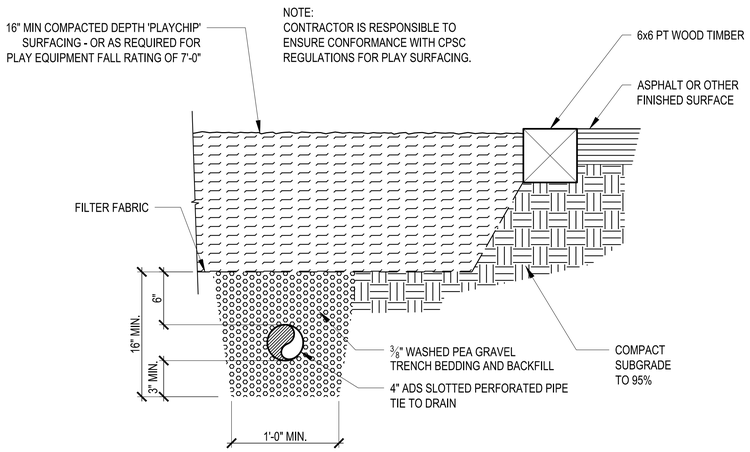
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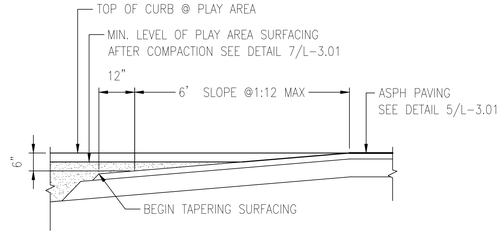
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1 SOFT SURFACE TRAIL
SCALE: 1/2" = 1'-0"



2 CURB AND PLAY SURFACE @ PLAY AREA
SCALE: 1-1/2" = 1'-0"



3 ADA ACCESS RAMP @ PLAY AREA
SCALE: 1/2" = 1'-0"



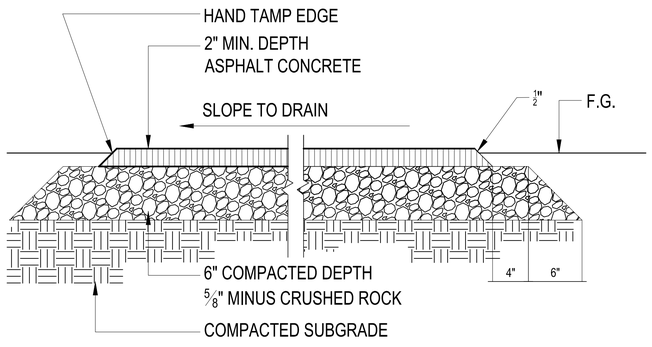
PACIFIC OUTDOOR PRODUCTS
SE-5350
6' TABLE, IN-GROUND MOUNT

4 PICNIC TABLE
SCALE: NTS

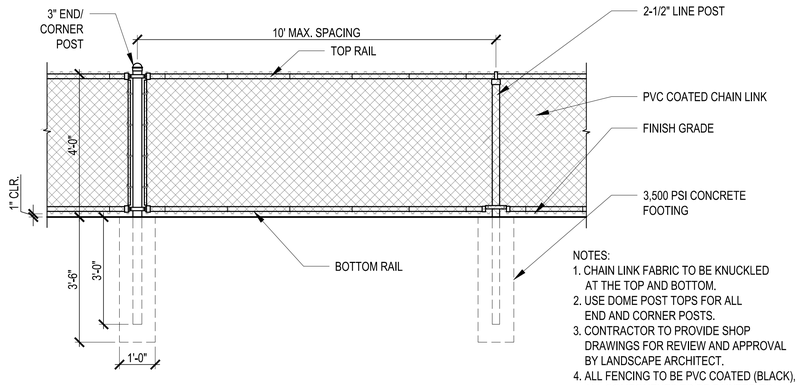


PACIFIC OUTDOOR PRODUCTS
SE-5165
6' BENCH, IN-GROUND MOUNT

5 BENCH
SCALE: NTS

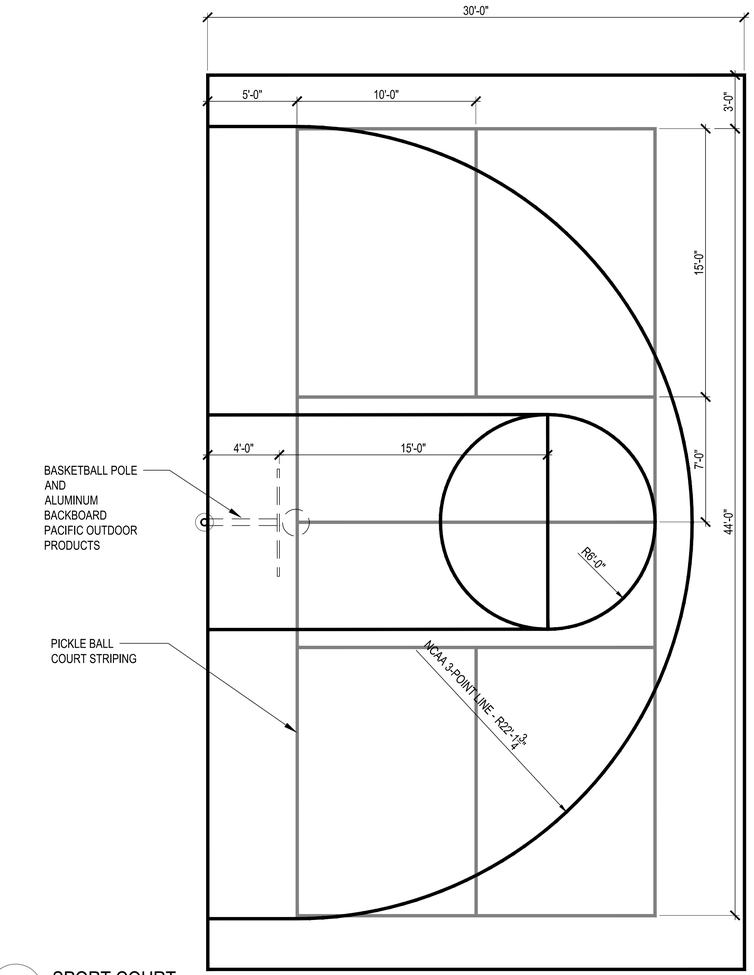


6 ASPHALT PAVEMENT
SCALE: 1-1/2" = 1'-0"



NOTES:
1. CHAIN LINK FABRIC TO BE KNUCKLED AT THE TOP AND BOTTOM.
2. USE DOME POST TOPS FOR ALL END AND CORNER POSTS.
3. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT.
4. ALL FENCING TO BE PVC COATED (BLACK), ALL COMPONENTS TO BE PAINTED TO MATCH.

7 CHAIN LINK FENCE
SCALE: 1-1/2" = 1'-0"



8 SPORT COURT
SCALE: 1/2" = 1'-0"

NO.	DATE	REVISION	BY	CK.
1	11/12/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

STATE OF WASHINGTON
REGISTERED LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 439

PRELIMINARY SUBDIVISION AND PRD APPLICATION

GARIBALDI PRD

SITE DETAILS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
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PROJECT NO.
0054-18-028

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SHEET 22 OF 25

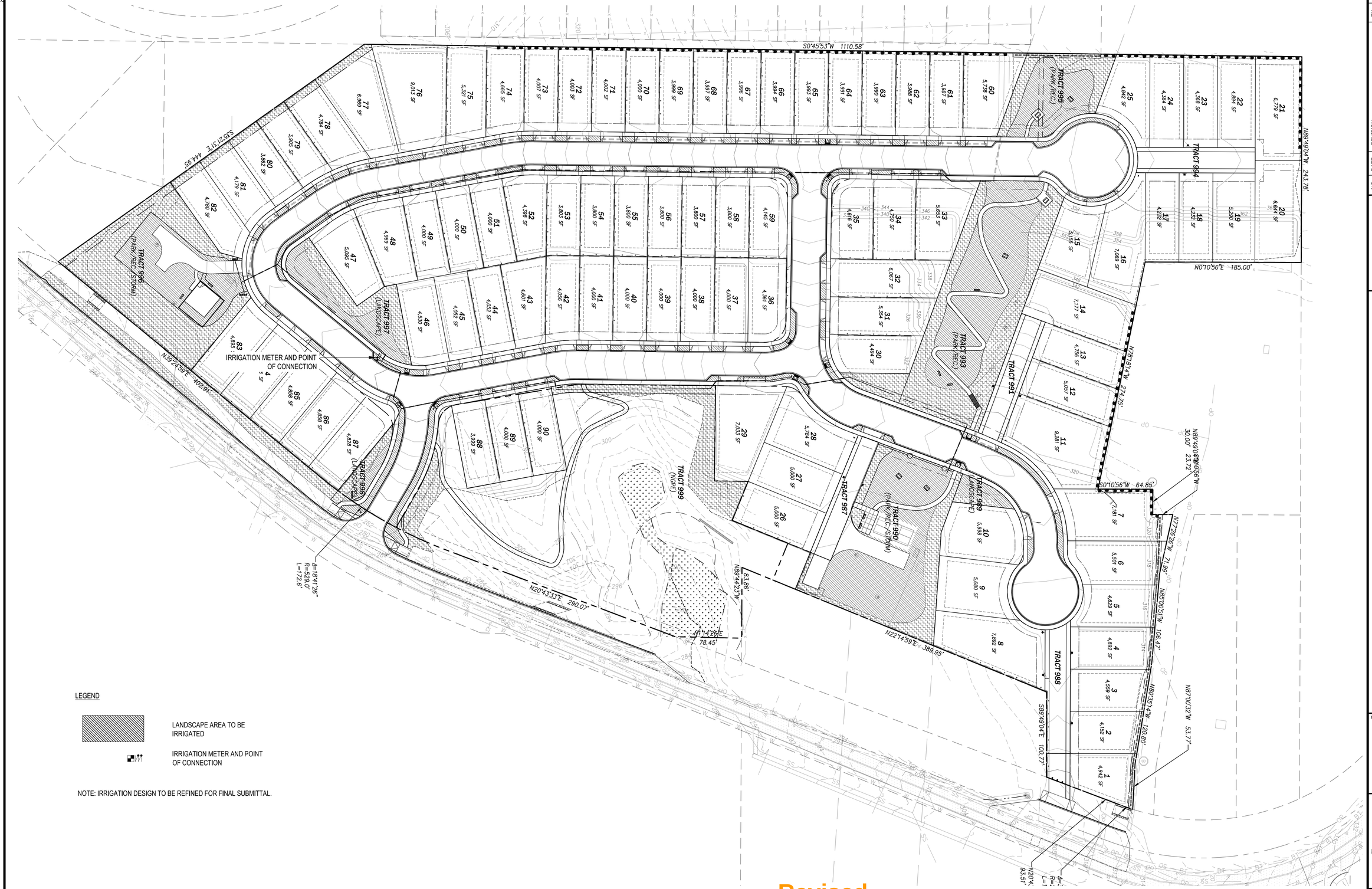
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TBLOCK
LSIT-541828
LPLNT-541828
CGRD541828
CUWS541828
CUSD541828
OTOP541828
CSIT541828
CNOT541828
LIRR-541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



LEGEND

LANDSCAPE AREA TO BE IRRIGATED

IRRIGATION METER AND POINT OF CONNECTION

NOTE: IRRIGATION DESIGN TO BE REFINED FOR FINAL SUBMITTAL.

1 SCHEMATIC IRRIGATION PLAN
SCALE: 1" = 50'-0"

Revised
11/16/2021 2:30:58 PM

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NO.	DATE	REVISION	BY	CK.
1	11/12/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

STATE OF WASHINGTON
REGISTERED LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 439

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

SCHEMATIC IRRIGATION PLAN

CITY OF MONROE SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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PROJECT NO.
0054-18-028

DRAWING
L2.00

SHEET 23 OF 25

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OTOP541828
CSIT541828
Vicinity
CNOT541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

NOVEMBER 12, 2021

CITY OF MONROE SNOHOMISH COUNTY, WA

EXHIBIT 13

SURVEY DATA

EXISTING BOUNDARY, TOPOGRAPHIC, AND PLANIMETRIC INFORMATION SHOWN ON THIS PLAN AND OTHERS IN THIS SET WERE USED AS A BASIS FOR DESIGN AND REPRESENT FIELD SURVEY DATA AND MAPPING PREPARED BY MEAD GILMAN LAND SURVEYORS (JOB NO. 13120), AS PROVIDED BY THE PROJECT OWNER, AND DOES NOT REPRESENT WORK BY CPH CONSULTANTS. THE FOLLOWING SURVEY DATA WAS PROVIDED WITH THE TOPOGRAPHIC MAP BY MEAD GILMAN LAND SURVEYORS:

LEGAL DESCRIPTION

PARCEL A:

THAT PORTION OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST, W.M., LYING WESTERLY OF COUNTY ROAD DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE NORTH LINE OF SAID SUBDIVISION, SOUTH 88°25'17" WEST 700 FEET WEST OF THE WEST RIGHT OF WAY LINE OF COUNTY ROAD; THENCE SOUTH AT RIGHT ANGLES TO SAID NORTH LINE 185 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH ALONG THE FOREGOING HEADING, 185 FEET TO SAID NORTH LINE; THENCE WEST ALONG SAID NORTH LINE 230 FEET, MORE OR LESS, TO THE WEST LINE OF SAID SUBDIVISION; THENCE SOUTH ALONG SAID WEST LINE 660 FEET, MORE OR LESS, TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 31; THENCE EAST ALONG THE SOUTH LINE OF SAID SUBDIVISION 570 FEET, MORE OR LESS, TO A POINT WHICH LIES 150 FEET WEST OF THE WEST RIGHT OF WAY LINE OF COUNTY ROAD; THENCE NORTHEASTERLY, PARALLEL WITH SAID WEST RIGHT OF WAY LINE, 380 FEET, MORE OR LESS, TO A POINT 300 FEET SOUTH OF THE NORTH
LINE OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 31; THENCE EAST PARALLEL WITH THE NORTH LINE OF SAID SUBDIVISION 151.06 FEET TO THE WEST RIGHT OF WAY LINE OF COUNTY ROAD; THENCE NORTH 20°28'47" EAST, ALONG SAID WEST RIGHT OF WAY LINE 108.33 FEET; THENCE DEPARTING SAID RIGHT OF WAY NORTH 88°46'11" WEST FOR 93.80 FEET; THENCE NORTH 82°20'53" WEST FOR 120.79 FEET; THENCE NORTH 86°46'30" WEST FOR 106.47 FEET THENCE NORTH 79°12'05" WEST FOR 71.99 FEET;
THENCE SOUTH 01°34'43" EAST FOR 23.72 FEET TO THE SOUTH LINE OF THE NORTH 175 FEET OF SAID SUBDIVISION; THENCE SOUTH 88°25'17" WEST FOR 30.00 FEET; THENCE SOUTH 01° 34'43" EAST FOR 65.00 FEET; THENCE NORTH 80°03'53" WEST 275.55 FEET TO THE POINT OF BEGINNING.

(ALSO KNOWN AS A PORTION OF LOTS 1 AND 2 OF SHORT PLAT RECORDED UNDER RECORDING NO. 7801110243 AND REVISED BY CITY OF MONROE BOUNDARY LINE ADJUSTMENT BA 200207 RECORDED UNDER RECORDING NO. 200312305117, RECORDS OF SNOHOMISH COUNTY, WASHINGTON.)

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

PARCEL B:

THAT PART OF THE WEST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST W.M. DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID SUBDIVISION; THENCE SOUTH ALONG WEST LINE 300 FEET; THENCE SOUTH 87°51'40" EAST 618.04 FEET TO A POINT ON THE WEST LINE OF THE COUNTY ROAD KNOWN AS TROMBLEY ROAD; THENCE NORTH ALONG SAID COUNTY ROAD 217.80 FEET TO THE EAST LINE OF THE WEST HALF; THENCE NORTH ALONG SAID EAST LINE 137.37 FEET TO THE NORTHEAST CORNER OF SAID SUBDIVISION; THENCE SOUTH 88°29'32" WEST TO POINT OF BEGINNING;

EXCEPT THE SOUTH 150 FEET AS MEASURED AT RIGHT ANGLES TO THE SOUTH LINE THEREOF.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

PARCEL C:

THE SOUTH 150 FEET, AS MEASURED AT RIGHT ANGLES TO THE SOUTH LINE OF THE FOLLOWING DESCRIBED TRACT:

THAT PART OF THE WEST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST W.M. DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID WEST HALF; THENCE SOUTH ALONG THE WEST LINE THEREOF 300 FEET; THENCE SOUTH 87°51'40" EAST 618.04 FEET TO A POINT ON THE WEST LINE OF COUNTY ROAD KNOWN AS TROMBLEY ROAD; THENCE NORTHERLY ALONG SAID WEST LINE TO THE EAST LINE OF SAID WEST HALF; THENCE NORTH ALONG SAID EAST LINE TO THE NORTH LINE OF SAID WEST HALF; THENCE WEST ALONG SAID NORTH LINE TO THE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

PARCEL D:

THAT PORTION OF THE WEST ONE-HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST, W.M., DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SUBDIVISION; THENCE SOUTH 0°57'33" EAST ALONG THE WEST LINE OF SAID SUBDIVISION, 300.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 0°57'33" EAST 150.00 FEET; THENCE SOUTH 87°51'40" EAST 543.12 FEET TO A POINT ON THE WEST LINE OF THE COUNTY ROAD; THENCE NORTHEASTERLY ALONG A CURVE CONCAVE TO THE WEST HAVING A RADIUS OF 543.70 FEET THROUGH A CENTRAL ANGLE OF 14°03'26" AN ARC LENGTH OF 133.39 FEET (THE INITIAL RADIAL OF WHICH BEARS NORTH 55°27'34" WEST); THENCE NORTH 20°29' WEST 31.14 FEET; THENCE NORTH 87°51'40" WEST 618.04 FEET TO THE POINT OF BEGINNING;

EXCEPT ANY PORTION CONVEYED TO THE CITY OF MONROE FOR RIGHT OF WAY UNDER AUDITOR'S FILE NO. 202003020421;

PARCEL E:

THAT PORTION OF THE WEST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OFSECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST, W. M., DESCRIBED AS FOLLOWS:COMMENCING AT THE NORTHWEST CORNER OF SAID SUBDIVISION; THENCE SOUTH 00°57'33" ALONG WEST LINE OF SAID SUBDIVISION A DISTANCE OF 450 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 87°51'40" EAST 543.12 FEET TO A POINT ON WEST LINE OF COUNTY ROAD; THENCE SOUTHWESTERLY ALONG SAID WEST LINE A DISTANCE OF 406.10 FEET TO A POINT 388.88 FEET AS MEASURED ALONG THE COUNTY ROAD FROM THE WEST LINE OF SAID WEST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE NORTHWESTERLY TO THE POINT OF BEGINNING;

(ALSO KNOWN AS LOT 1, SNOHOMISH COUNTY SHORT PLAT 303(6-78), RECORDED UNDER RECORDING NUMBER 7809080289, IN SNOHOMISH COUNTY, WASHINGTON);

EXCEPT THAT PORTION CONVEYED TO THE CITY OF MONROE FOR RIGHT OF WAY PURPOSES UNDER AUDITOR'S FILE NO. 202011020266;

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

MERIDIAN

WASHINGTON STATE PLANE COORDINATE SYSTEM - NORTH ZONE
(NAD 83/91)
PER OPUS SOLUTIONS ON STATIC GPS OBSERVATIONS

VERTICAL DATUM

PER OPUS SOLUTIONS ON RAPID STATIC GPS OBSERVATIONS

BENCHMARKS

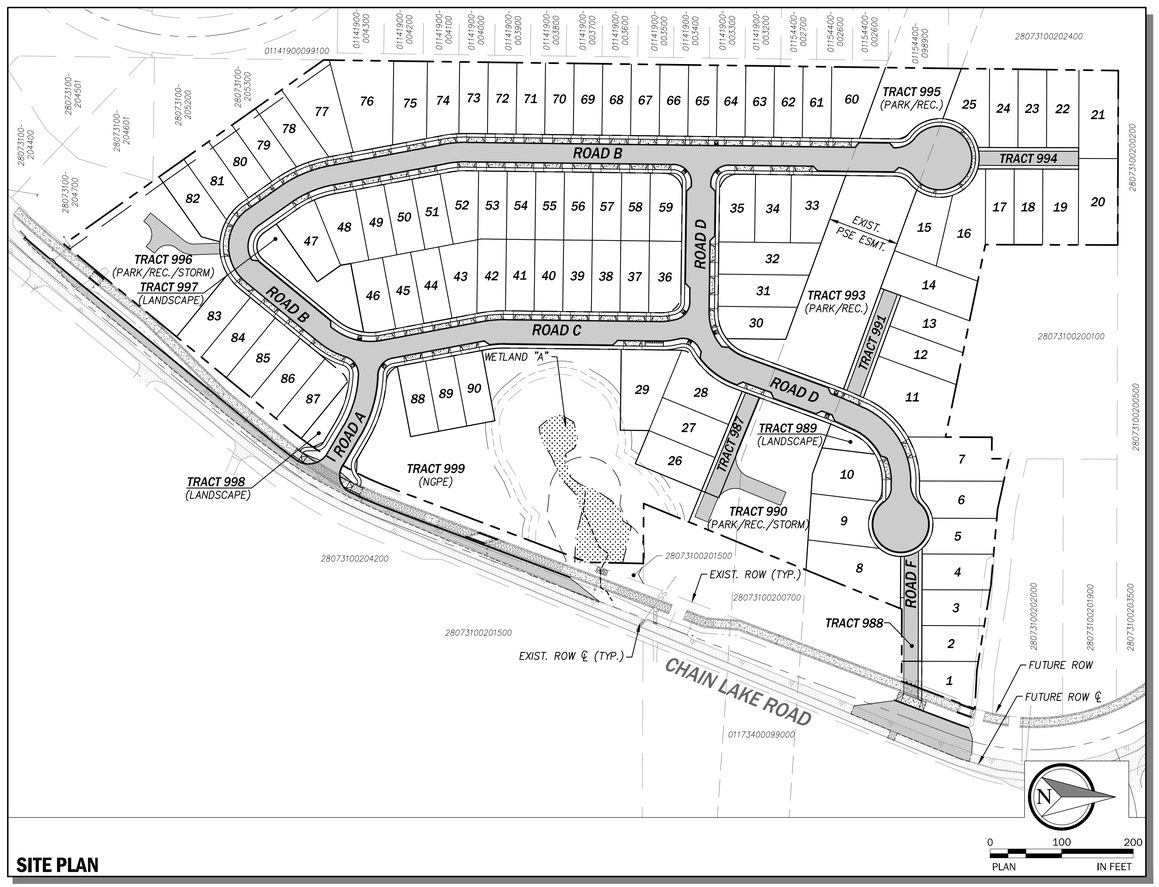
ORIGINAL SET 1/2" REBAR AND RED CAP ALONG EAST SIDE CHAIN LK ROAD 4' EAST OF EDGE ASPHALT ACROSS FROM DRIVEWAY #13424 AND ~37' NORTH OF POWER POLE
ELEV. = 311.85'

TBM-A SET 1/2" REBAR AND RED CAP ALONG EAST SIDE CHAIN LK ROAD ~73' NE OF DRIVEWAY #13582 AND 82' NORTH OF SEWER MANHOLE
ELEV. = 293.50'

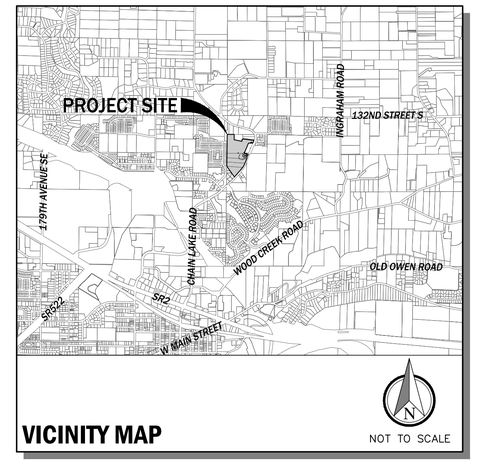
TBM-B FOUND 4"X4" CONC MON WITH 2-1/2" BRASS DISC STAMPED "DRCA 20719" DOWN 0.5' IN CASE 0.3' N OF INTX 136TH PL SE AND 199TH AVE SE.
ELEV. =348.12'

NOTES

1. *A 5" ELECTRONIC TOTAL STATION WAS USED FOR THIS FIELD TRAVERSE SURVEY. ACCURACY MEETS OR EXCEEDS W.A.C. 332-130-090.*
2. *ALL TITLE INFORMATION SHOWN ON THIS SURVEY WAS EXTRACTED FROM CHICAGO TITLE INSURANCE COMPANY COMMITMENT NUMBER 500076741, UPDATE 3, DATED JANUARY 30, 2020. MEAD GILMAN AND ASSOCIATES HAS CONDUCTED NO INDEPENDENT TITLE RESEARCH, AND HAS RELIED WHOLLY ON THE TITLE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.*
3. *THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME. ALL CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN SEPTEMBER, 2018, UNLESS OTHERWISE NOTED.*
4. *PROPERTY AREA = 788,385 ± SQUARE FEET. (18.10 ACRES)*
5. *ALL DISTANCES ARE IN FEET.*
6. *6. UNDERGROUND UTILITIES WERE LOCATED BASED ON SURFACE EVIDENCE (I.E. PAINT MARKS, SAW CUTS IN PAVEMENT, COVERS, LIDS, ETC.). THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION, AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.*



SITE PLAN



VICINITY MAP

PROJECT INFORMATION

SNOHOMISH CO. TAX PARCEL NO.	PARCEL AREA	
28073100200800	8.94 AC	389,232 SF
28073100201600	2.69 AC	117,344 SF
28073100203900	2.17 AC	94,534 SF
28073100202800	1.96 AC	85,386 SF
28073100202900	2.09 AC	90,952 SF
TOTAL SITE AREA	17.85 AC	777,448 SF

	R4 - PRD	
MINIMUM DENSITY	n/a	
MINIMUM NO. LOTS		
BASE DENSITY	4.00 DU/AC	
BASE ALLOWABLE NO. LOTS	71	
MAXIMUM (PRD) DENSITY	5.20 DU/AC	
MAXIMUM ALLOWABLE NO. LOTS	93	
PROPOSED RESIDENTIAL LOTS	**90**	
MINIMUM LOT AREA REQUIRED	n/a	
MINIMUM LOT WIDTH REQUIRED	30 FT	
MAXIMUM LOT COVERAGE ALLOWED	60 FT	
MAXIMUM BUILDING HEIGHT ALLOWED	35 FT	
FRONT YARD SETBACK	10 FT	
GARAGE SETBACK	20 FT	
SIDE YARD SETBACK	5 FT	
REAR YARD SETBACK	10 FT	
MINIMUM LOT SIZE PROPOSED	3,800 SF	
MINIMUM LOT WIDTH PROPOSED	40 FT	
AVERAGE LOT AREA PROPOSED	4,821 SF	
MAXIMUM LOT SIZE PROPOSED	9,281 SF	
RESIDENTIAL LOT MIX (MMC 18.84.080.D)	31.1%	≤ 4,000 SF
	43.3%	4,001 TO 5,000 SF
	25.6%	> 5,000 SF
REQUIRED PARK AND REC. OPEN SPACE:	900 SF/DU	64,252 SF
PARK AND RECREATION OPEN SPACE PROVIDED:		
TRACT 990	25,562 SF	
TRACT 993	31,332 SF	
TRACT 995	9,572 SF	
TOTAL CENTRAL PARK	66,467 SF	
TRACT 996	25,471 SF	
TOTAL PARK/RECREATION OPEN SPACE	91,938 SF	
OTHER ADDITIONAL OPEN SPACE AREAS:		
Tract 999, CRITICAL AREA OPEN SPACE (NGPE)	81,159 SF	
Tract 998, LANDSCAPE COMMON AREA	1,935 SF	
Tract 997, LANDSCAPE COMMON AREA	7,810 SF	
Tract 989, LANDSCAPE COMMON AREA	1,594 SF	
TOTAL OTHER OPEN SPACE AREAS	92,498 SF	
TOTAL PARK/RECREATION OPEN SPACE	184,436 SF	4.23 AC

UTILITY PURVEYORS AND PUBLIC SERVICE PROVIDERS	
WATER	CITY OF MONROE
SANITARY SEWER	CITY OF MONROE
STORM DRAINAGE	CITY OF MONROE
FIRE DISTRICT	SNOHOMISH REGIONAL FIRE & RESCUE
SCHOOL DISTRICT	MONROE SCHOOL DIST. NO. 103
POWER (ELECTRICITY)	PUGET SOUND ENERGY
NATURAL GAS	PUGET SOUND ENERGY

PROJECT TEAM

APPLICANT/CESCL
GARIBALDI LAKE, LLC
CONTACT: MELANIE DAVIES
1010 MARKET STREET
KIRKLAND, WA 98033
PHONE: (425) 576-9390
EMAIL: MDAVIES@WESTCOTTHOMES.COM

CIVIL ENGINEER
CPH CONSULTANTS
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SURVEYOR
MEAD GILMAN
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FAX: (425) 486-6108

HABITAT/BIOLOGIST
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15020 BEAR CREEK ROAD NE
WOODINVILLE, WA 98077
PHONE: (425)861-7550

LANDSCAPE ARCHITECT
CPH CONSULTANTS
CONTACT: DAVE ANDREWS, LA
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FAX: (425) 285-2389
EMAIL: DAVE@CPHCONSULTANTS.COM

GEOTECH
TERRA ASSOCIATES, INC.
CONTACT: KEVIN ROBERS, PE
12220 113TH AVENUE NE
KIRKLAND, WA 98034
PHONE: (425) 821-7777

DRAWING INDEX

SHEET	DWG	DESCRIPTION
1	P0.00	COVER
2	P0.10	EXISTING CONDITIONS
3	P1.00	PRELIMINARY CLEARING AND TESC PLAN
4	P2.00	PRELIMINARY PLAT PLAN
5	P2.10	TYPICAL ROADWAY SECTIONS
6	P3.00	PRELIMINARY GRADING PLAN
7	P4.00	PRELIMINARY STORM DRAINAGE PLAN
8	P4.01	VAULT PLAN AND SECTIONS
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10	P4.10	PRELIMINARY ROAD PROFILES
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12	P5.00	FRONTAGE IMPROVEMENT PLAN
13	P6.00	PRELIMINARY UTILITY PLAN
14	P7.00	PARK, RECREATION AND OPEN SPACE PLAN
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17	L1.02	LANDSCAPE ENLARGEMENTS
18	L1.03	LANDSCAPE ENLARGEMENTS
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20	L1.05	LANDSCAPE ENLARGEMENTS
21	L1.10	SITE PLAN, IMPACTS AND MITIGATION OVERVIEW PLAN
22	L1.11	SITE DETAILS
23	L2.00	CONCEPTUAL IRRIGATION PLAN
24	W1.0	CRITICAL AREAS EXISTING CONDITIONS PLAN
25	W1.1	CRITICAL AREAS IMPACTS AND MITIGATION PLAN

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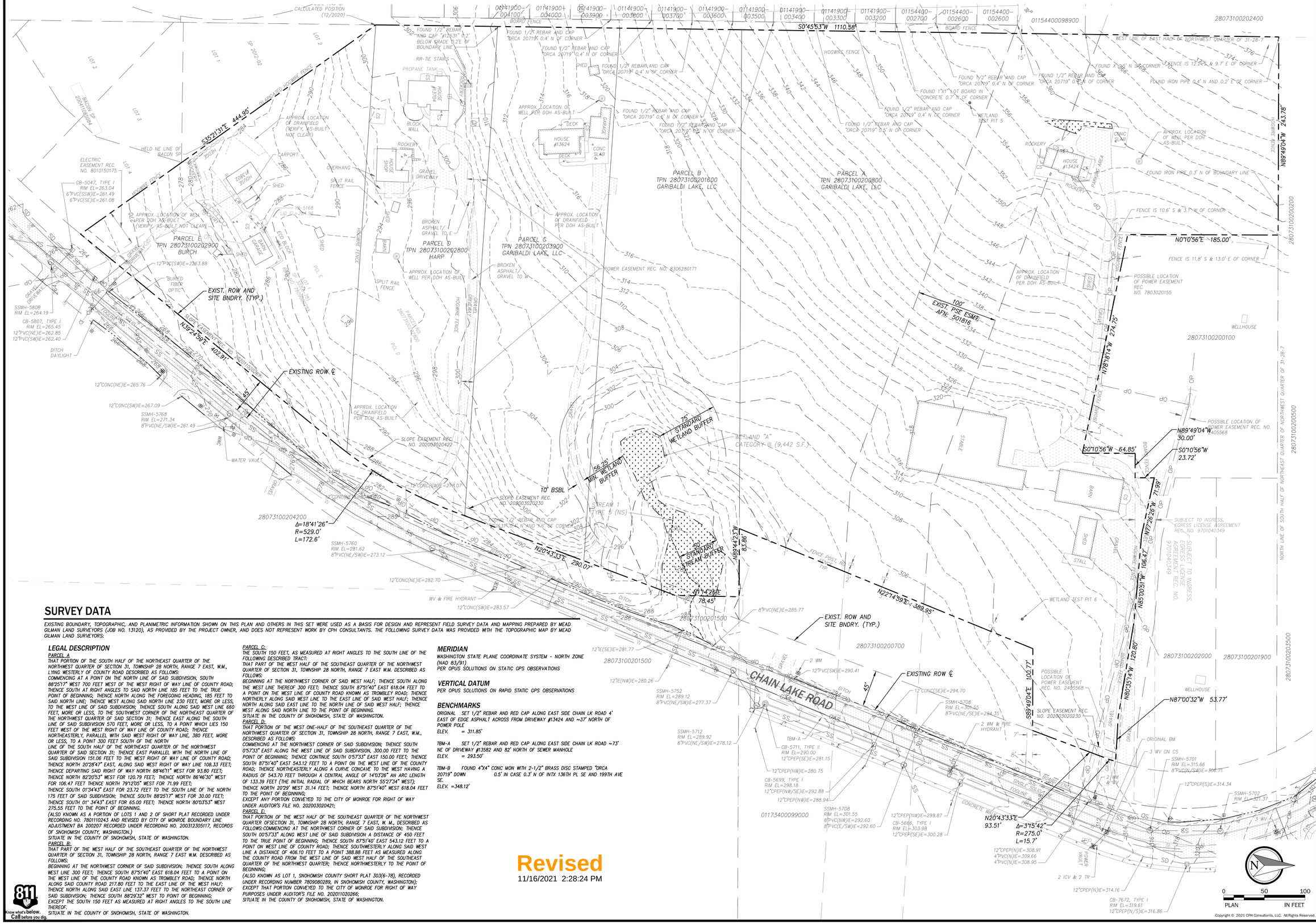
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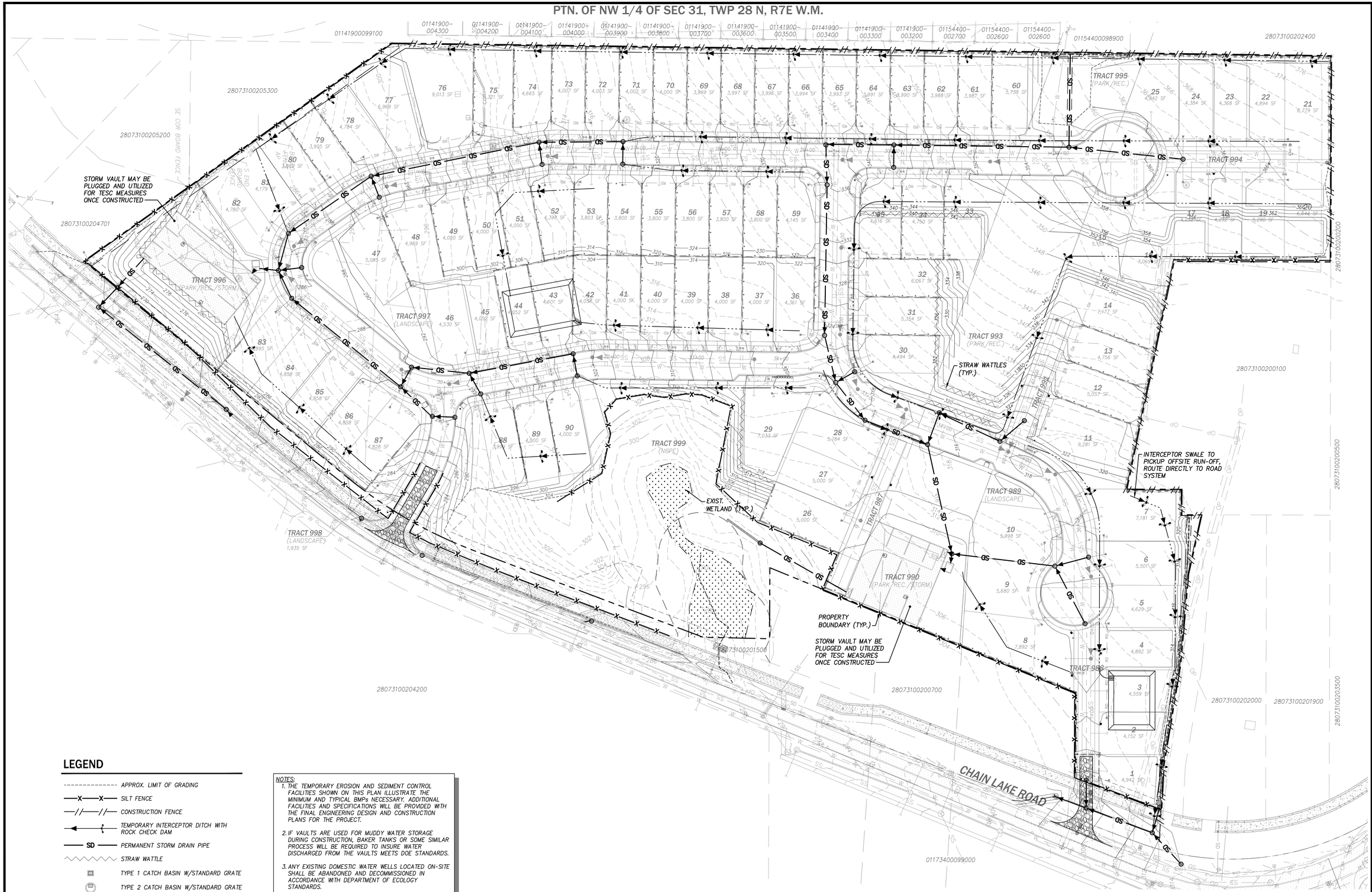
OTOP541828
TBLOCK

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.


PARCEL A
TPN 28073100200800
GARIBALDI LAKE, LLC
PARCEL B
TPN 28073100201600
GARIBALDI LAKE, LLC
PARCEL C
TPN 28073100203900
GARIBALDI LAKE, LLC
PARCEL D
TPN 28073100202800
HARP
PARCEL E
TPN 28073100202900
BURCH
CHAIN LAKE ROAD
EXIST. ROW AND SITE BNDRY. (TYP.)
EXISTING ROW ℄
S0°45'53"W 1110.58'
N89°49'04"W 743.78'
N0°10'56"E 185.00'
N78°18'14"W 274.75'
S35°21'31"E 444.95'
N39°24'59"E 402.91'
N20°43'33"E 290.07'
N22°14'39"E 389.95'
N87°00'32"W 53.77'
N20°43'33"E 93.51'
Δ=18°41'26"
R=529.0'
L=172.6'
Δ=31°51'42"
R=275.0'
L=15.7'
100' EXIST. PSE ESMT. AFN: 501816
75' STANDARD WETLAND BUFFER
156.25' MIN. WETLAND BUFFER
50' STANDARD STREAM BUFFER
WETLAND "A" CATEGORY III (9,442 S.F.)
STREAM 1 TYPE 5 (NS)
10' BSBL
SLOPE EASEMENT REC. NO. 202003020422
SLOPE EASEMENT REC. NO. 202003020230
POWER EASEMENT REC. NO. 8306280171
POSSIBLE LOCATION OF POWER EASEMENT REC. NO. 7803020155
POSSIBLE LOCATION OF POWER EASEMENT REC. NO. 8405568
POSSIBLE LOCATION OF POWER EASEMENT REC. NO. 2405568
SUBJECT TO INGRESS, EGRESS LICENSE AGREEMENT REC. NO. 9701040349
ELECTRIC EASEMENT REC. NO. 8010150175
HELD NE LINE OF BACON SP
BACON SP 200411060004
APPROX. LOCATION OF DRAINFIELD (VERIFY, AS-BUILT NOT CLEAR)
APPROX. LOCATION OF WELL PER DOH AS-BUILT (VERIFY, AS-BUILT NOT CLEAR)
APPROX. LOCATION OF WELL PER DOH AS-BUILT
APPROX. LOCATION OF DRAINFIELD PER DOH AS-BUILT
APPROX. LOCATION OF DRAINFIELD PER DOH AS-BUILT
APPROX. LOCATION OF WELL PER DOH AS-BUILT
APPROX. LOCATION OF DRAINFIELD PER DOH AS-BUILT
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.4' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.6' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.5' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.9' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.7' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.4' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.4' E OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.4' N

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CUSD541828
CUWS541828
TBLOCK
CESC541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



LEGEND

- APPROX. LIMIT OF GRADING
- SILT FENCE
- CONSTRUCTION FENCE
- TEMPORARY INTERCEPTOR DITCH WITH ROCK CHECK DAM
- SD — PERMANENT STORM DRAIN PIPE
- STRAW WATTLE
- TYPE 1 CATCH BASIN W/STANDARD GRATE
- TYPE 2 CATCH BASIN W/STANDARD GRATE
- STORM DRAINAGE PROTECTION INSERT
- CONSTRUCTION ENTRANCE
- SEDIMENT TRAP

NOTES:

1. THE TEMPORARY EROSION AND SEDIMENT CONTROL FACILITIES SHOWN ON THIS PLAN ILLUSTRATE THE MINIMUM AND TYPICAL BMP's NECESSARY. ADDITIONAL FACILITIES AND SPECIFICATIONS WILL BE PROVIDED WITH THE FINAL ENGINEERING DESIGN AND CONSTRUCTION PLANS FOR THE PROJECT.
2. IF VAULTS ARE USED FOR MUDDY WATER STORAGE DURING CONSTRUCTION, BAKER TANKS OR SOME SIMILAR PROCESS WILL BE REQUIRED TO INSURE WATER DISCHARGED FROM THE VAULTS MEETS DOE STANDARDS.
3. ANY EXISTING DOMESTIC WATER WELLS LOCATED ON-SITE SHALL BE ABANDONED AND DECOMMISSIONED IN ACCORDANCE WITH DEPARTMENT OF ECOLOGY STANDARDS.
4. EXISTING PRIVATE SEPTIC TANKS AND DRAINFIELDS ON THE SITE SHALL BE ABANDONED IN ACCORDANCE WITH SNOHOMISH COUNTY DEPARTMENT OF HEALTH STANDARDS.
5. A SEPARATE DEMOLITION PERMIT WILL REMOVE ALL EXISTING ON-SITE STRUCTURES.

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1	11/12/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

MATTHEW J. HEGSTAD — 18426 — REGISTERED PROFESSIONAL ENGINEER — 11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PRELIMINARY CLEARING AND TESC PLAN

SNOHOMISH COUNTY, WA
CITY OF MONROE

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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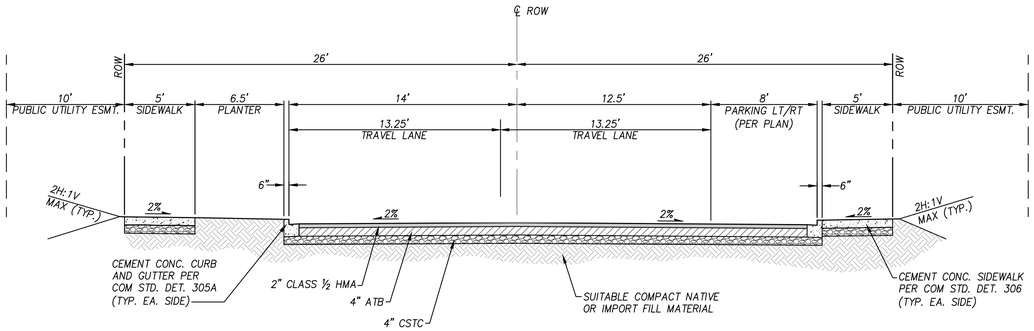
SHEET 3 OF 25

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PLAN IN FEET

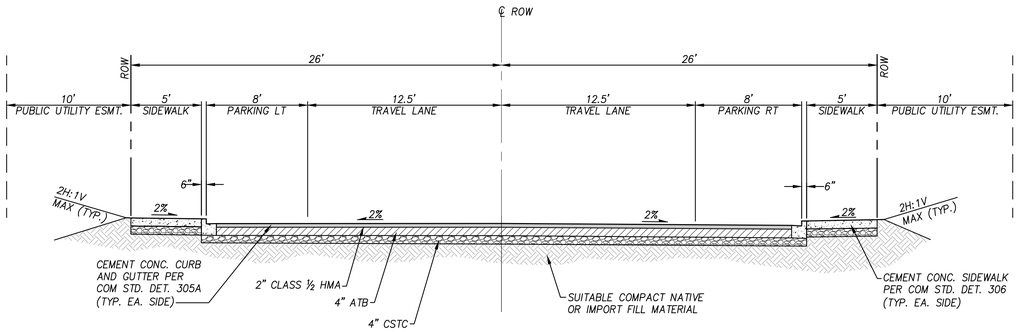
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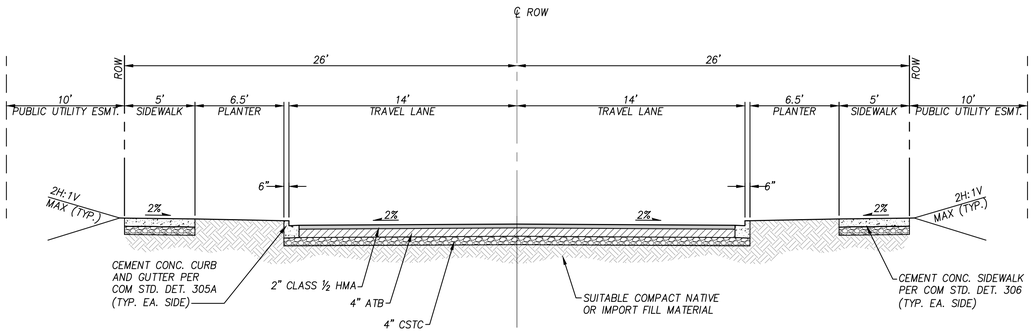
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PARALLEL PARKING ONE SIDE



PARALLEL PARKING EACH SIDE

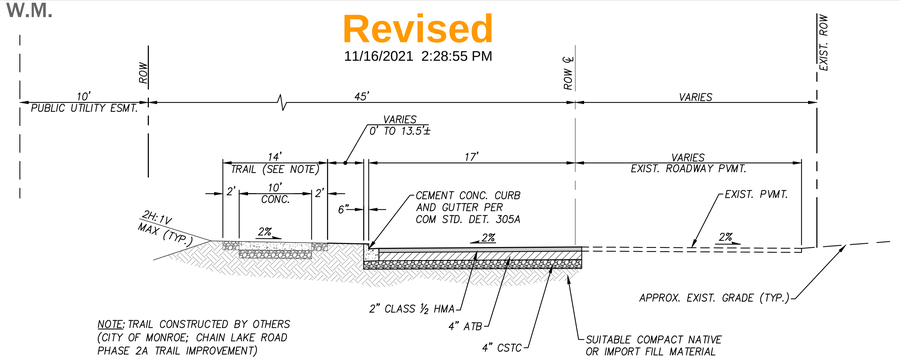


STANDARD

A P2.00 TYPICAL ROAD SECTION - LOCAL ACCESS

NOT TO SCALE

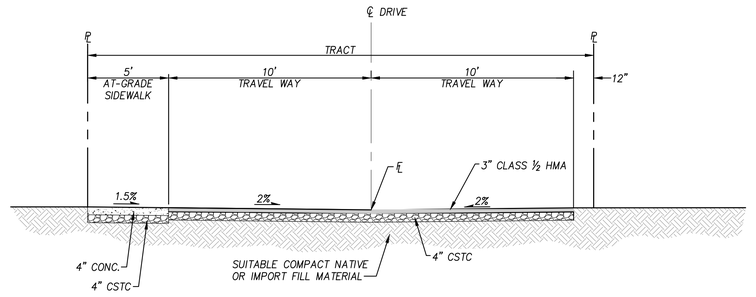
(PUBLIC; ON-STREET PARKING CONDITIONS PER PLAN)



B P2.00 TYPICAL ROAD SECTION - CHAIN LAKE ROAD

NOT TO SCALE

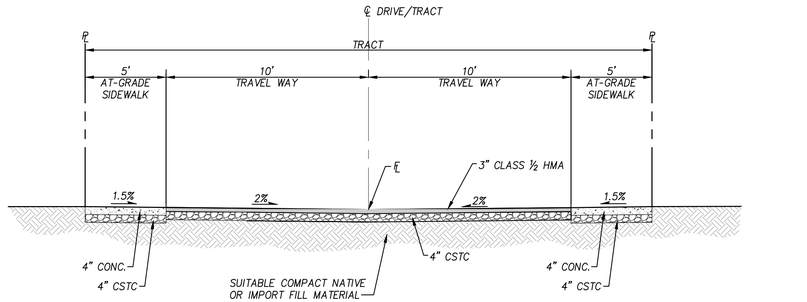
(PUBLIC, MAJOR COLLECTOR)



C P2.00 TYPICAL ROAD SECTION - TRACT 987

NOT TO SCALE

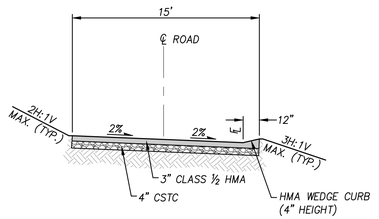
(PRIVATE ACCESS)



D P2.00 TYPICAL ROAD SECTION - PRIVATE ACCESS

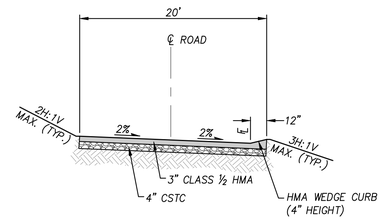
NOT TO SCALE

(PRIVATE ROAD)



E P2.00 TYPICAL ROAD SECTION - POND ACCESS ROAD

NOT TO SCALE



F P2.00 TYPICAL ROAD SECTION - TRACT 990

NOT TO SCALE

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MATTHEW J. EVANS — STATE OF WASHINGTON — 18346 — REGISTERED PROFESSIONAL ENGINEER
11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

TYPICAL ROADWAY SECTIONS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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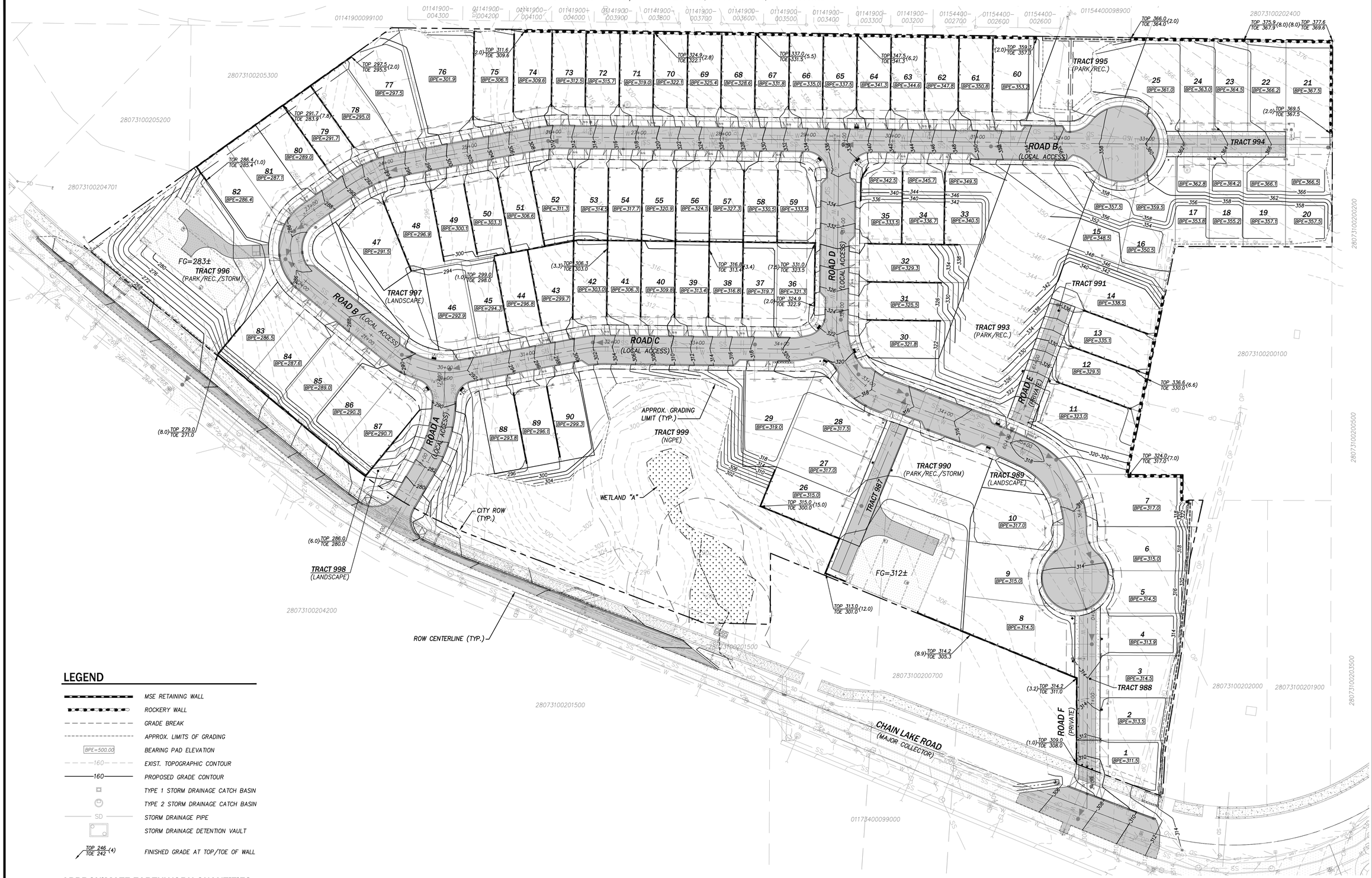
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PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



LEGEND

- MSE RETAINING WALL
- ROCKERY WALL
- GRADE BREAK
- APPROX. LIMITS OF GRADING
- BPE=500.00 — BEARING PAD ELEVATION
- 160 — EXIST. TOPOGRAPHIC CONTOUR
- 160 — PROPOSED GRADE CONTOUR
- TYPE 1 STORM DRAINAGE CATCH BASIN
- TYPE 2 STORM DRAINAGE CATCH BASIN
- SD — STORM DRAINAGE PIPE
- STORM DRAINAGE DETENTION VAULT
- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL

APPROXIMATE EARTHWORK QUANTITIES

THE FOLLOWING EARTHWORK QUANTITIES ARE APPROXIMATE BASED ON PRELIMINARY FINISHED DESIGN GRADES AND ARE PROVIDED TO ILLUSTRATE THE GENERAL EARTHWORK EFFORTS FOR THE PROJECT EXCLUDING VOLUMES FOR PAVEMENT SECTIONS, STORM VAULTS, AND TRENCH DISPLACEMENT:

CUT:	36,591 CY
FILL:	54,173 CY
NET (FILL):	17,581 CY

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MATTHEW J. HEPNER — 18346 — REGISTERED PROFESSIONAL ENGINEER — 11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PRELIMINARY GRADING PLAN

SNOHOMISH COUNTY, WA

CITY OF MONROE

CLIENT

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SHEET 6 OF 25

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CBSN541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

CB110, TYPE 1
STA 23+85.55, 13.25' LT
119LF 12" SD
S=5.80%
CB105, TYPE 1
STA 22+73.87, 13.25' LT
45LF 12" SD
S=3.83%
CB100, TYPE 1–L
STA 22+37.52, 13.25' LT
WATER QUALITY VAULT
3LF 18" SD
S=2.97%
STORM DETENTION VAULT,
SEE DETAILS ON SHT P4.01
47LF 12" SD
S=8.41%
32LF 12" SD
S=0.71%
EXIST. CB-5807, TYPE 1
STA 95+56.90, 13.76' LT
CB1, TYPE 1
STA 95+59.22, 46.00' LT
GRAVEL INTERCEPTOR
TRENCH
193LF 12" SD
S=2.41%
36LF 12" SD
S=4.78%
CB200, TYPE 1
STA 22+08.61, 13.25' LT
CB5, TYPE 1
STA 97+50.00, 16.25' LT
8LF 12" SD
S=5.40%
CONN. TO EXIST.
CB206, TYPE 1
STA 11+74.06, 13.25' LT
TRACT 998
(LANDSCAPE)
CB10, TYPE 1
STA 99+56.44, 16.55' LT
4LF 12" SD
S=0.75%
CB15, TYPE 2–48"
STA 100+42.82, 15.35' LT
CONN. TO EXIST.
EXIST. STORM SYSTER
CB20, TYPE 1–L
STA 102+58.98, 16.25' LT
6LF 12" SD
S=0.68%
INLET PROTECTION
FOR EXIST. CULVERT
TRACT 996
(PARK/REC./STORM)
22LF 18" SD
S=0.68%
TRACT 997
(LANDSCAPE)
CB101, TYPE 1
THRU CURB
STA 22+37.52
13.54' RT
CB111, TYPE 1
STA 23+85.47
13.25' RT
28LF 12" SD
S=5.24%
CB116, TYPE 1
STA 25+84.92
13.25' RT
27LF 12" SD
S=0.57%
CB125, TYPE 1
STA 26+82.18
13.25' RT
CB120, TYPE 1
STA 26+82.18, 13.25' LT
99LF 12" SD
S=8.73%
CB115, TYPE 1
STA 25+84.92, 13.25' LT
26LF 12" SD
S=0.60%
202LF 12" SD
S=7.88%
26LF 12" SD
S=0.60%
CB330, TYPE 1
STA 30+02.18, 13.25' LT
CB325, TYPE 1
STA 29+21.79, 13.25' LT
80LF 12" SD
S=4.73%
26LF 12" SD
S=0.75%
207LF 12" SD
S=7.09%
48LF 12" SD
S=7.09%
CB320, TYPE 2–48"
STA 29+23.88, 34.90' RT
CB331, TYPE 1
STA 30+02.18, 13.25' RT
178LF 12" SD
S=6.92%
CB315, 48" std grate
STA 32+12.75, 13.28' RT
CB210, TYPE 1
STA 20+47.50
13.25' RT
69LF 12" SD
S=2.84%
125LF 12" SD
S=6.34%
CB215, TYPE 1
STA 30+31.92
13.25' LT
CB220, TYPE 1
STA 31+56.77, 13.25' LT
57LF 12" SD
S=5.08%
CB311, TYPE 1
STA 29+59.09
255.28' RT
CB335, TYPE 1
STA 32+08.94, 13.33' LT
TRACT 995
(PARK/REC.)
110LF 6" SD
S=6.05%
135LF 12" SD
S=2.69%
CB340, TYPE 2–48"
STA 33+43.79, 0.00' T
ROOF DRAIN (TYP.)
TRACT 994
ROOF DRAINS (TYP.)
TRACT 993
(PARK/REC.)
TRACT 991
CB301, TYPE 1
THRU CURB
STA 33+88.03
20.04' LT
40LF 12" SD
S=1.16%
79LF 12" SD
S=2.26%
CB303, TYPE 1
STA 31+60.21,
310.53' RT
38LF 12" SD
S=3.20%
CB302, TYPE 1
STA 31+31.61
335.30' RT
CB310, TYPE 2–48"
STA 32+64.01
12.36' RT
26LF 12" SD
S=0.78%
56LF 12" SD
S=3.72%
CB305, TYPE 1
STA 33+11.81
19.75' RT
79LF 12" SD
S=1.20%
CB300, TYPE 1–L
THRU CURB
STA 30+46.22
340.29' RT
TRACT 989
(LANDSCAPE)
CB406, TYPE 1
STA -0+78.52, 29.79' LT
TRACT 990
(PARK/REC./STORM)
TRACT 987
132LF 18" SD
S=3.30%
123LF 12" SD
S=0.96%
41LF 12" SD
S=6.86%
77LF 12" SD
S=1.00%
CB405, TYPE 2–48"
STA 36+47.39, 22.79' RT
CB410, TYPE 1
STA 37+17.49, 0.00' T
344LF GRAVEL TRENCH
TRACT 988
CB26, TYPE 1
STA 1+79.51, 0.00' T
33LF 12" SD
S=7.96%
OUTLET
PROTECTION
83LF 12" SD
S=4.23%
CB31, TYPE 1
STA 109+66.67, 47.96' LT
32LF 12" SD
S=12.93%
CB30, TYPE 1
STA 109+67.68, 16.25' LT
50LF 12" SD
S=10.20%
CB35, TYPE 1
STA 110+10.17, 11.41' RT
39LF 12" SD
S=1.46%
CB25, TYPE 1
STA 108+83.54, 16.25' LT
CB500, TYPE 1
STA 33+00.85, 209.16' RT
STORM DETENTION VAULT,
SEE DETAILS ON SHT P4.02
CB400, TYPE 2–48" w/ FLOW SPLITTER
STA 34+60.94
131.19' RT
WATER QUALITY VAULT
CB207, TYPE 1
STA 11+74.06, 13.25' RT
26LF 12" SD
S=0.53%
CB216, TYPE 1
STA 30+40.71
13.25' RT
27LF 12" SD
S=0.53%
CB225, TYPE 1
STA 31+56.77, 13.25' RT
TRACT 999
(NGPE)
EXIST.
WETLAND (TYP.)
DISPERSION
TRENCH
RIM=297.0
117LF 12" SD
S=2.57%
166LF 12" SD
S=2.32%
27LF 12" SD
S=0.75%
CB205, TYPE 1
STA 20+47.50
13.25' LT
50LF 12" SD
S=0.54%
28LF 12" SD
S=1.15%
ROAD A
(LOCAL ACCESS)
ROAD B
(LOCAL ACCESS)
ROAD C
(LOCAL ACCESS)
ROAD D
(LOCAL ACCESS)
ROAD E
(PRIVATE)
ROAD F
(PRIVATE)
CHAIN LAKE ROAD
(MAJOR COLLECTOR)
102LF GRAVEL TRENCH
01141900099100
01141900–004300
01141900–004200
01141900–004100
01141900–004000
01141900–003900
01141900–003800
01141900–003700
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01173400099000

LEGEND

- MSE RETAINING WALL
- 160 EXIST. TOPOGRAPHIC CONTOUR
- 160 PROPOSED GRADE CONTOUR
- TYPE 1 STORM DRAINAGE CATCH BASIN
- TYPE 2 STORM DRAINAGE CATCH BASIN
- SD STORM DRAINAGE PIPE (SEE NOTE 1)
- RD RD ROOF DRAIN CONNECTION (SEE NOTE 2)
- STORM DRAINAGE WQ VAULT

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1	11/12/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

MATTHEW J. HOSKINS
EXPIRES: 10/6/2022
PROFESSIONAL ENGINEER
11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PRELIMINARY STORM DRAINAGE PLAN

SNOHOMISH COUNTY, WA

CITY OF MONROE

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
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PROJECT NO.
0054-18-028

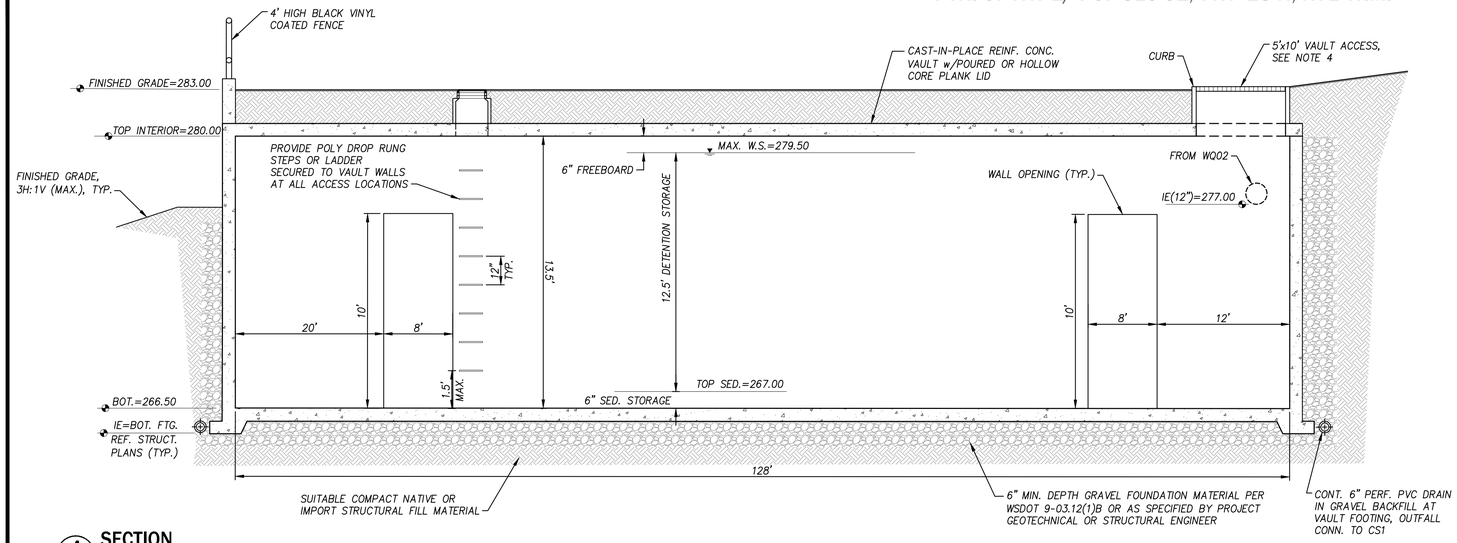
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SHEET 7 OF 25

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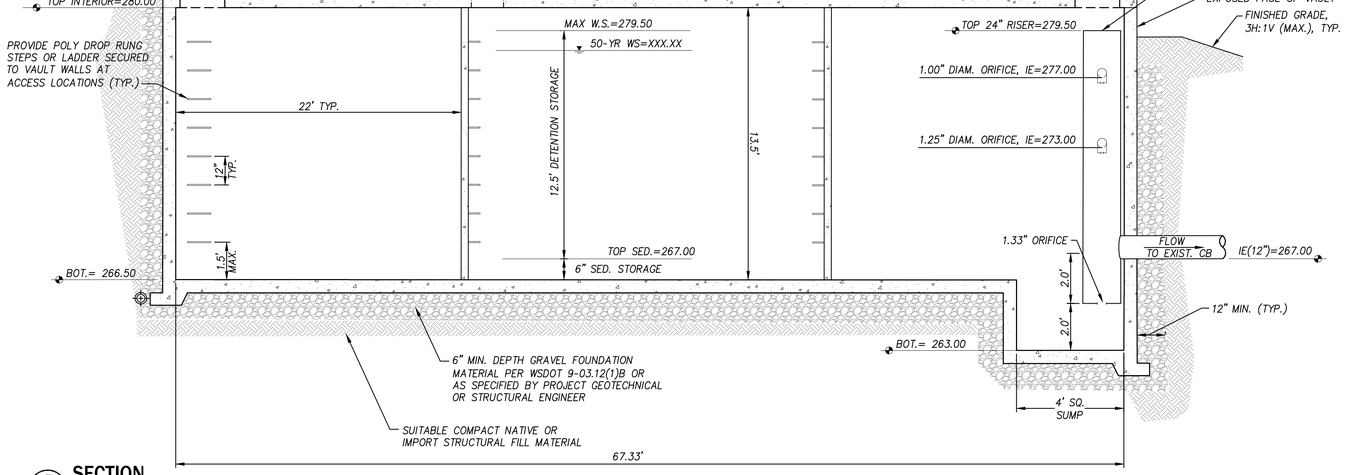
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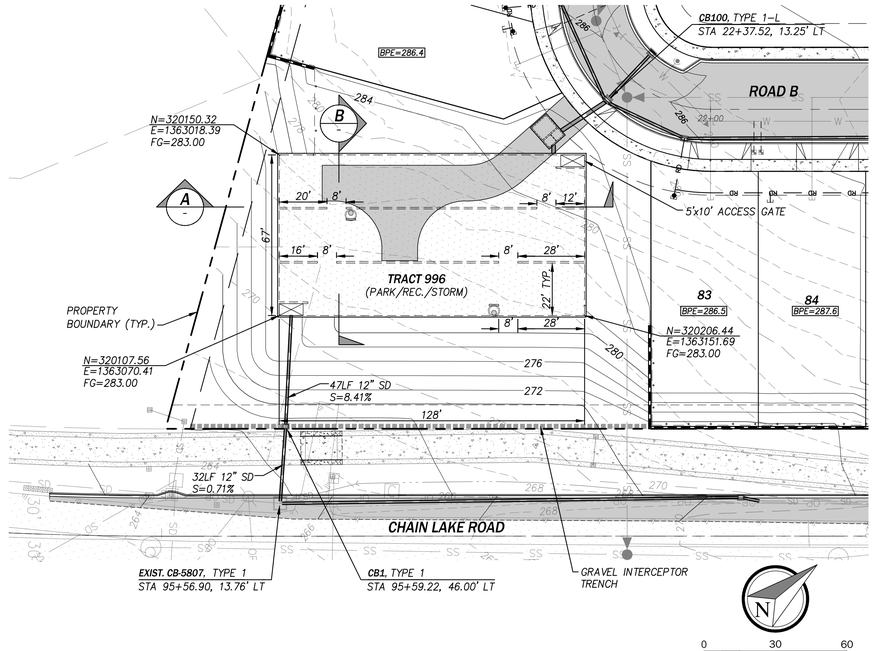
A — SECTION

NOT TO SCALE



B — SECTION

NOT TO SCALE



VAULT PLAN

SCALE: AS NOTED

NOTES:

1. VAULTS AND ALL APPURTENANCES SHALL MEET THE STRUCTURAL REQUIREMENTS FOR OVERBURDEN SUPPORT UNDER A MINIMUM HS-25 TRAFFIC LOADING AND 45K ON 18"X18" PAD OUTRIGGER LOADING WITH ANY SPECIAL PROVISIONS OF THE STRUCTURAL PLANS AND DETAILS.
2. ALL METAL PARTS SHALL BE CORROSION RESISTANT STEEL PARTS SHALL BE STAINLESS STEEL, OR EQUIVALENT.
3. A CONTINUOUS PVC OR HYDROPHILIC WATER STOP SHALL BE INSTALLED AT ALL CAST-IN-PLACE CONCRETE CONSTRUCTION OR EXPANSION JOINTS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH MANUFACTURER DATA FOR THE SPECIFIC TYPE AND MODEL OF WATER STOP PROPOSED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
4. THE 5'x10' VAULT ACCESS OPENING SHALL BE INSTALLED AT THE LOCATION SHOWN ON THIS PLAN IN ACCORDANCE WITH ANY ADDITIONAL PROVISIONS OF THE ACCOMPANYING STRUCTURAL PLANS AND DETAILS. THIS OPENING SHALL HAVE A PRE-MANUFACTURED LID INSTALLED FLUSH WITH ADJACENT FINISHED GRADES. THE TYPE OF COVER MAY BE A REMOVABLE GRATE, SPRING-LOADED HATCH, SOLID, OR EQUIVALENT COMBINATION THAT PROVIDES A CLEAR OPENING OF 5'X10'. THE LID SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR THE SAME STRUCTURAL LOADING CONDITIONS AS THE ASSOCIATED VAULT AS PROVIDED ON THE STRUCTURAL PLANS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH MANUFACTURER AND SUPPORTING STRUCTURAL DESIGN DATA TO CONFIRM THESE DESIGN PARAMETERS FOR THE ACTUAL TYPE AND MODEL OF THE VAULT ACCESS PROPOSED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
5. RIM ELEVATIONS SHALL BE ADJUSTED AS REQUIRED TO ACCOMMODATE ACTUAL ACCESS LOCATIONS AND FINISHED GRADE CONDITIONS.
6. ALL UNSUITABLE SOILS SHALL BE REMOVED FROM FOOTPRINT OF VAULT AND TO A DISTANCE BEYOND THE VAULT EQUAL TO THE DEPTH OF OVER EXCAVATED MATERIAL IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. ALL UNSUITABLE MATERIAL SHALL BE REPLACED WITH SUITABLE COMPACT STRUCTURAL FILL MATERIAL

NO.	DATE	REVISION	BY	CK.
1	11/12/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

MATTHEW J. HOUSER — STATE OF WASHINGTON — 18408 — REGISTERED PROFESSIONAL ENGINEER — 11/12/2021

GARIBALDI PRD
PRELIMINARY SUBDIVISION AND PRD APPLICATION
VAULT PLAN AND SECTIONS
CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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www.cphconsultants.com

PROJECT NO.
0054-18-028

DRAWING
P4.01

SHEET 8 OF 25

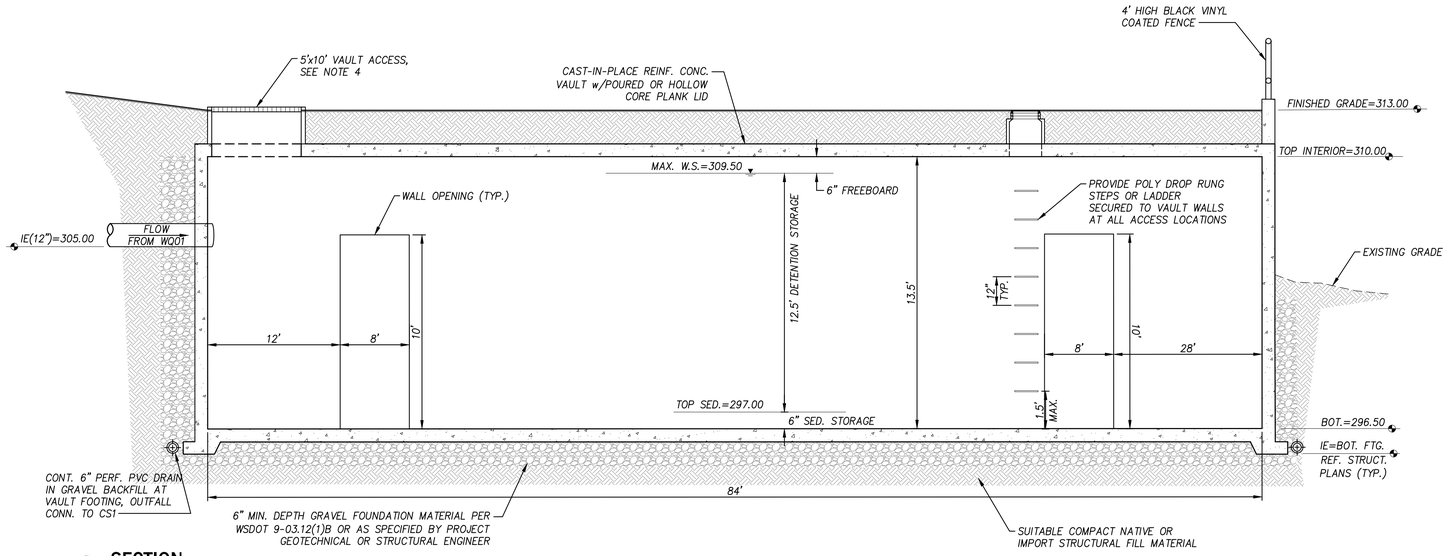
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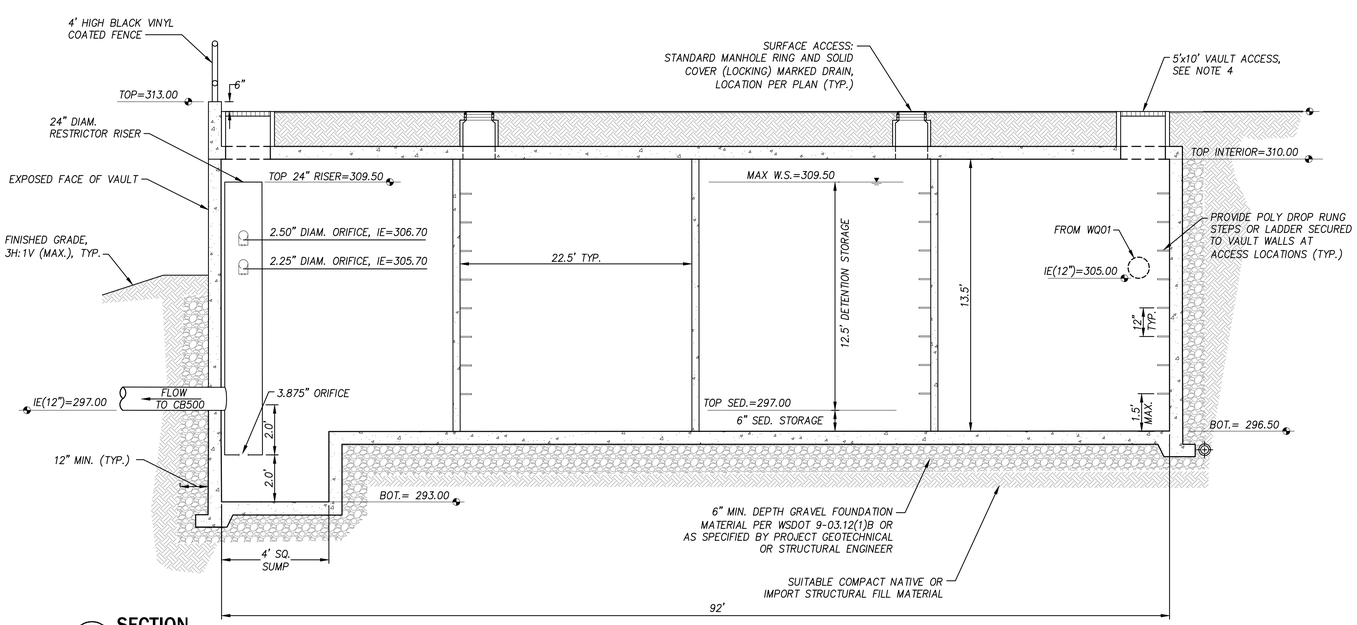
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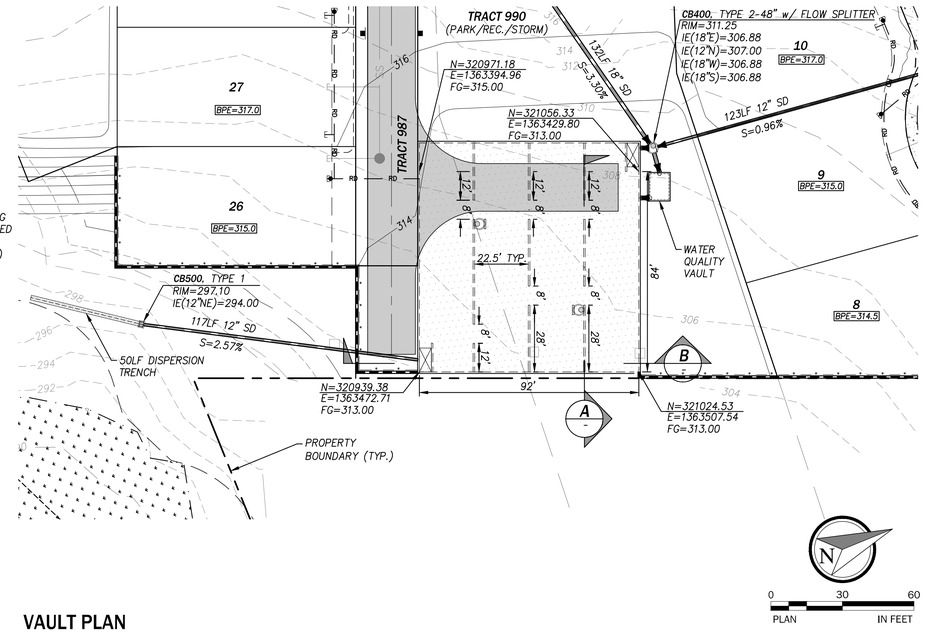
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A — SECTION
NOT TO SCALE



B — SECTION
NOT TO SCALE



VAULT PLAN

SCALE: AS NOTED

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MATTHEW J. HEPNER — EXPIRES 10/6/2021 — 11/12/2021

PRELIMINARY SUBDIVISION AND PRD APPLICATION

GARIBALDI PRD

VAULT PLAN AND SECTIONS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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PROJECT NO.
0054-18-028

DRAWING
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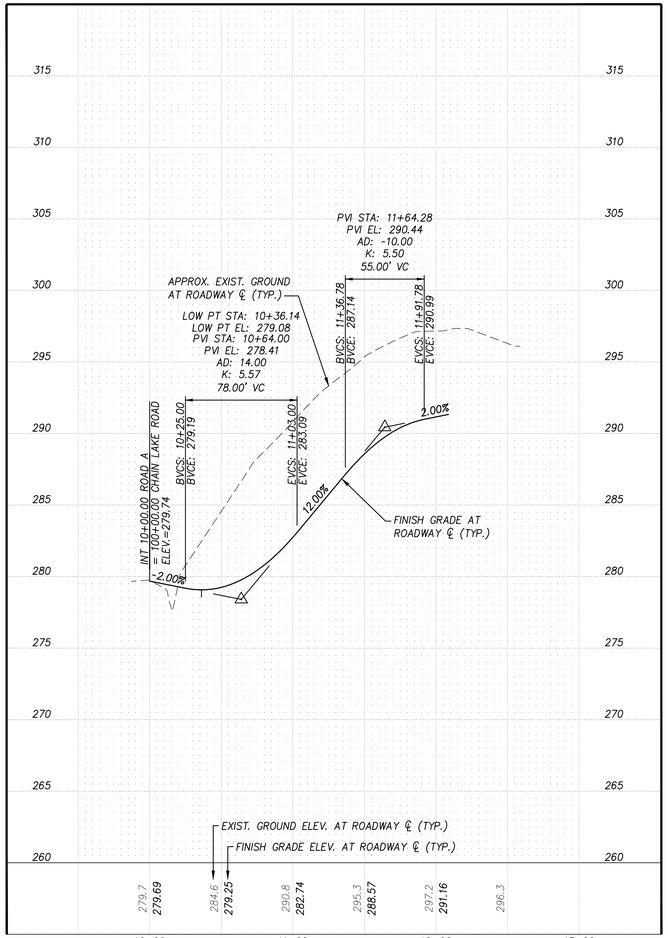
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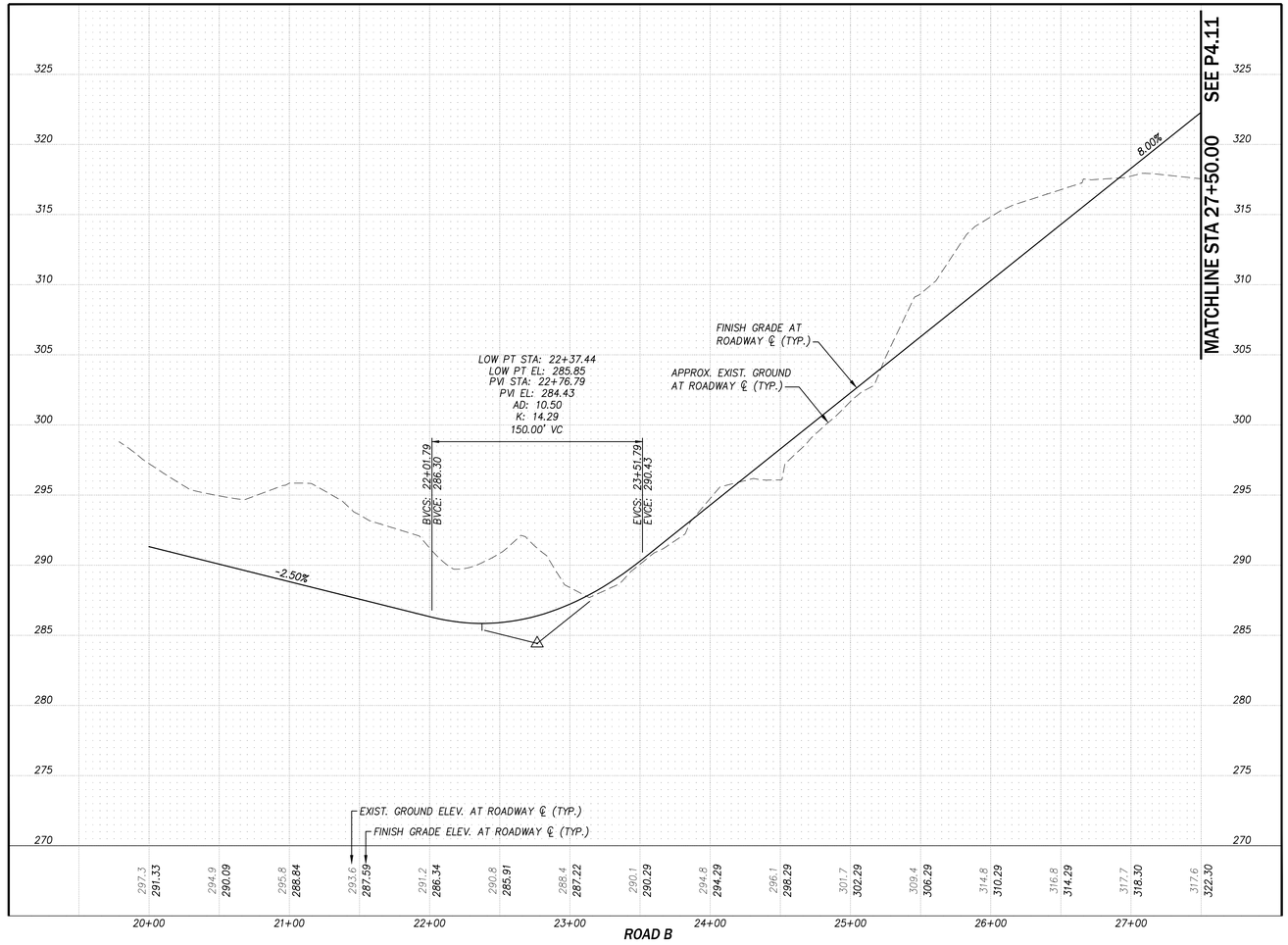
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MATTHEW J. HEPNER — STATE OF WASHINGTON — 18346 — REGISTERED PROFESSIONAL ENGINEER
11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PRELIMINARY ROAD PROFILES

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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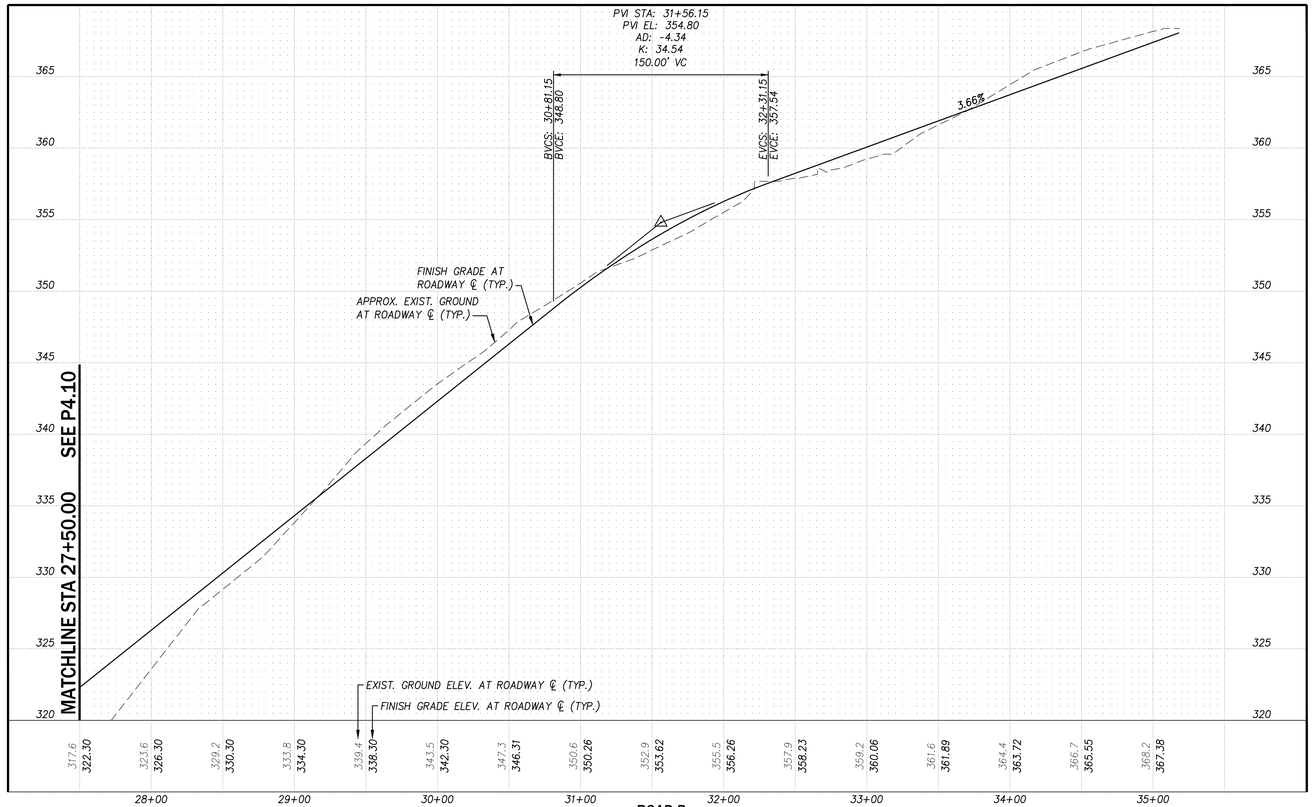
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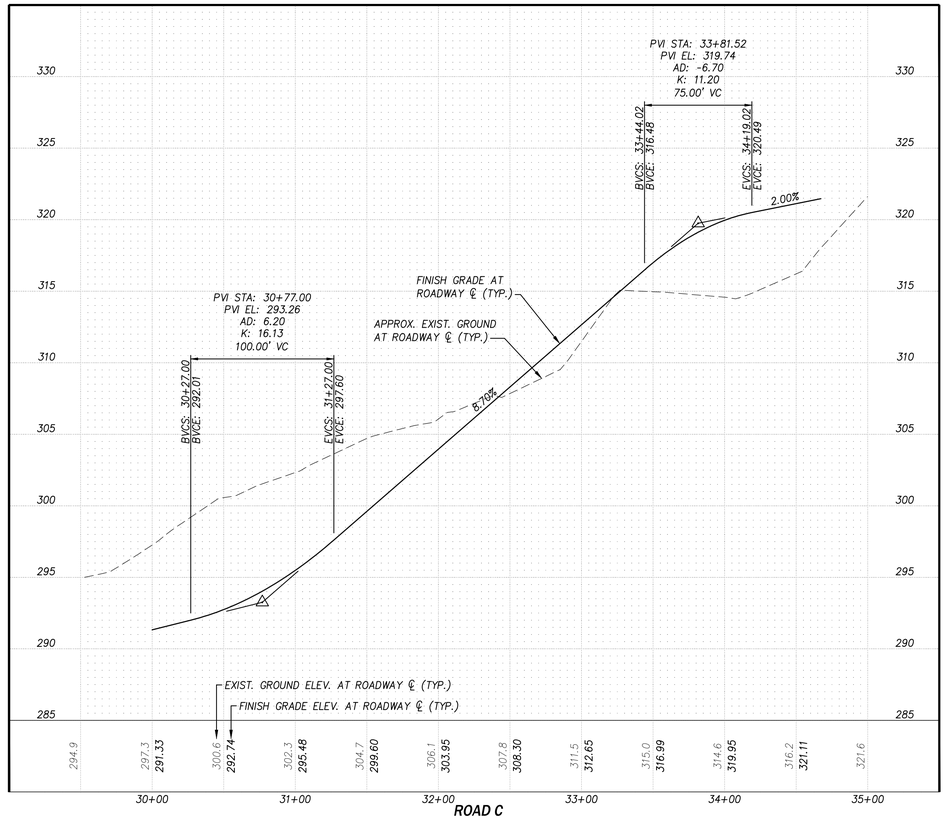
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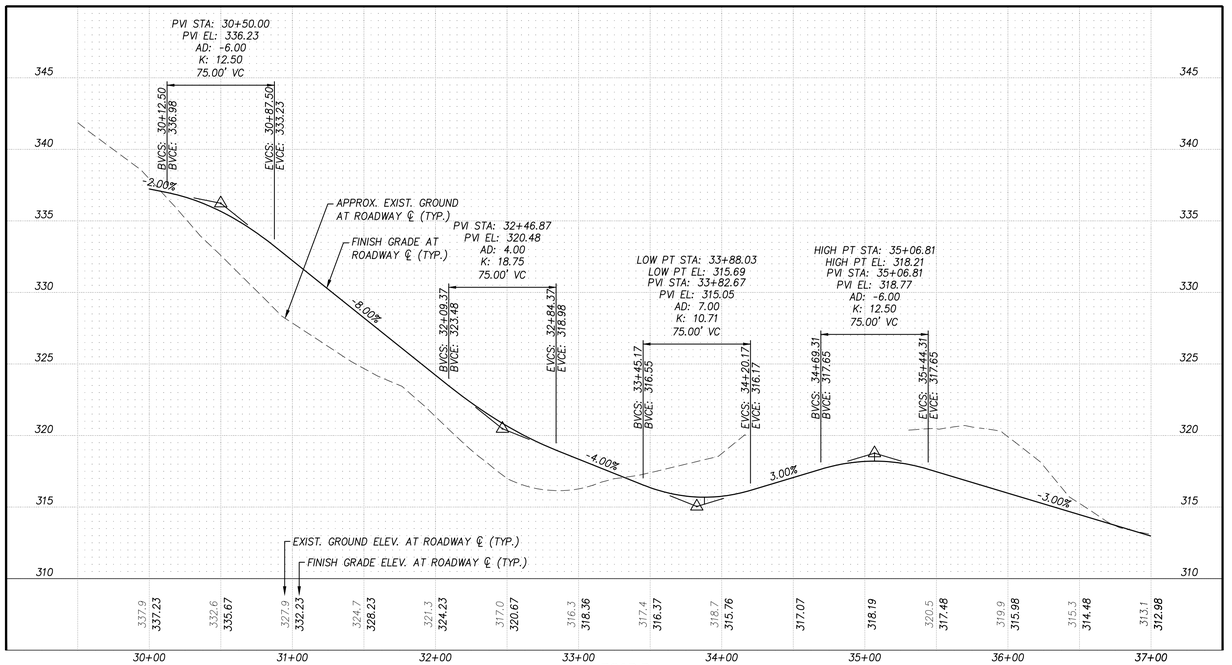
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11/12/2021

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PRELIMINARY ROAD PROFILES

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKLAND, WA 98033
PHONE: (425)876-9390

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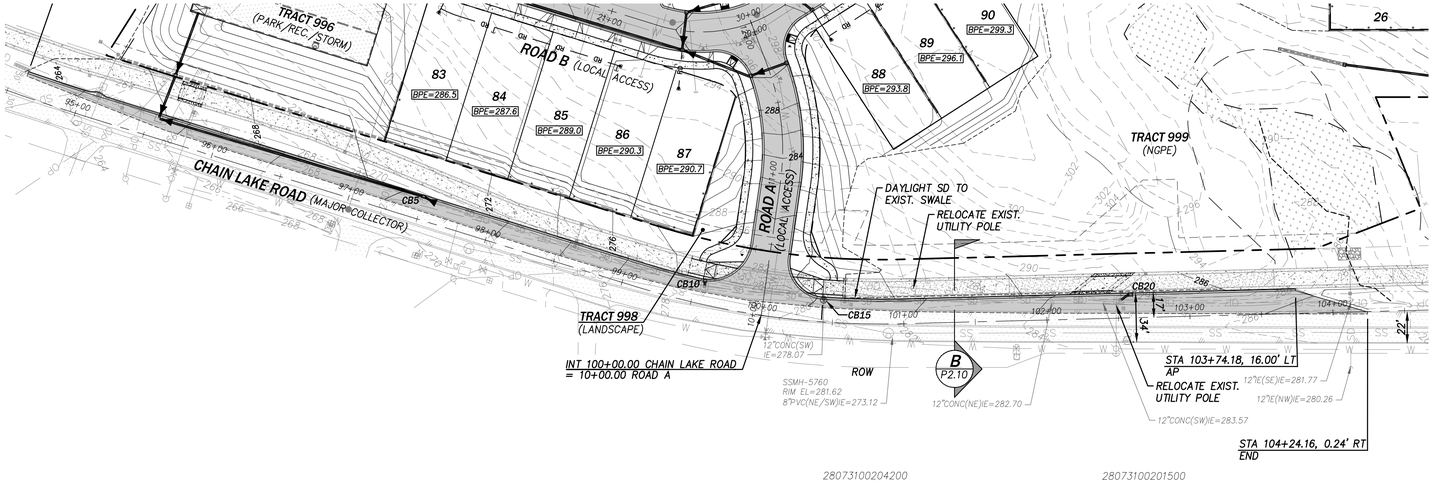
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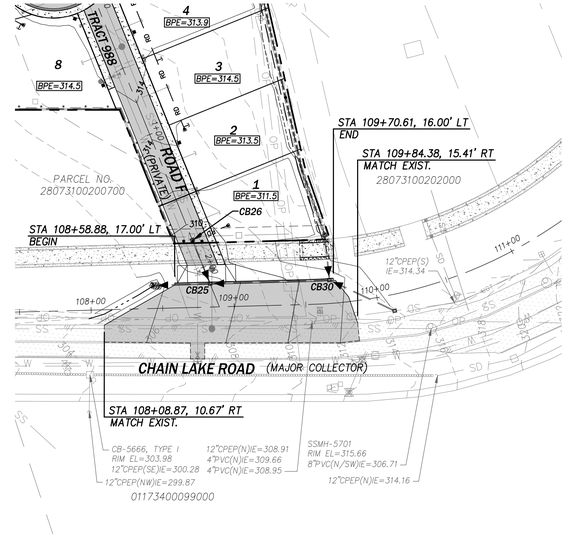
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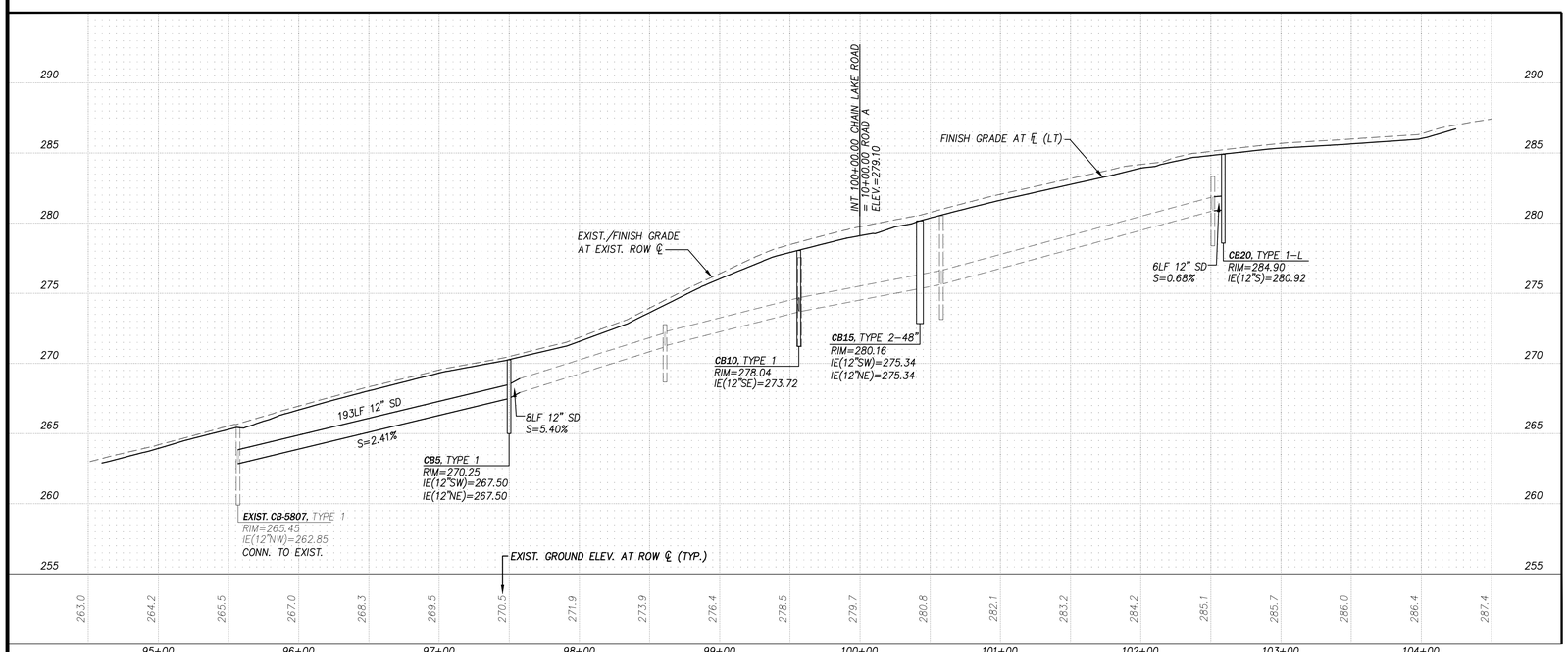
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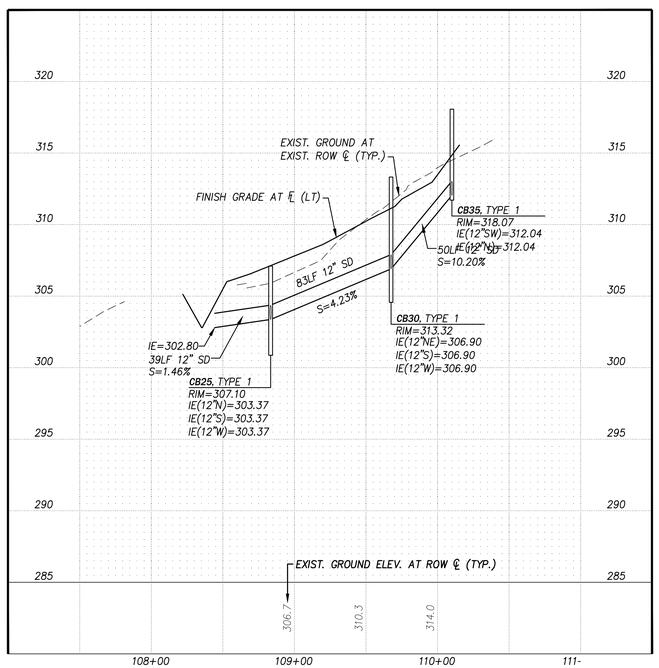
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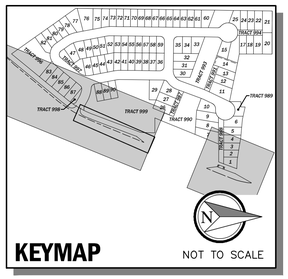
LEGEND

- BPE= — BEARING PAD ELEVATION
- FG= — FINISHED GRADE ELEVATION
- MSE WALL, LOCK+LOAD WALL OR EQ. (SEE C2.00 FOR ELEV.)
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

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MATTHEW J. HEGSTAD — EXPIRES: 10/6/2022 — PROFESSIONAL ENGINEER — 11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

FRONTAGE IMPROVEMENT PLAN

SNOHOMISH COUNTY, WA
CITY OF MONROE

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
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101 South Wenatchee Avenue, Suite C3
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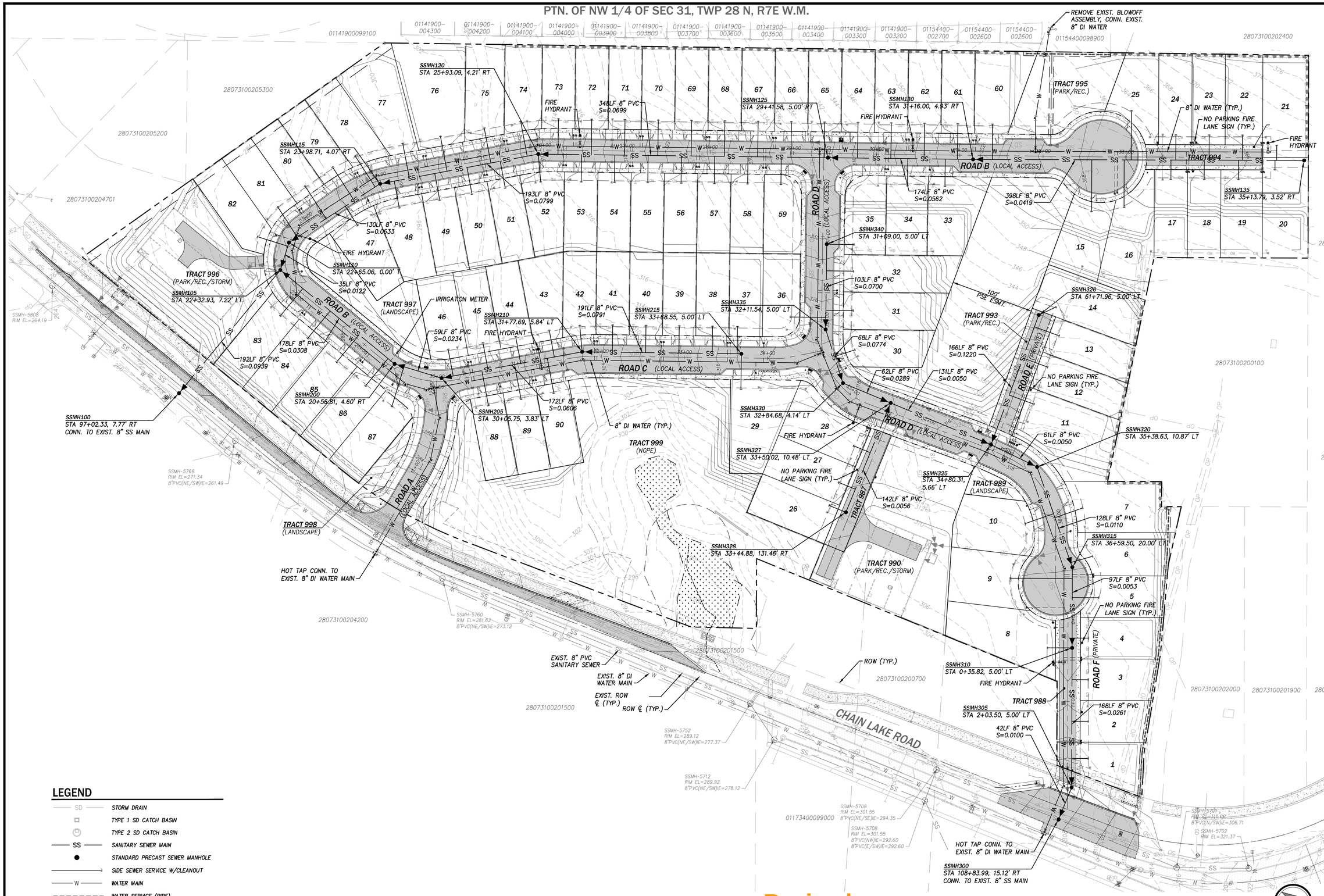
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LEGEND

- SD — STORM DRAIN
- TYPE 1 SD CATCH BASIN
- TYPE 2 SD CATCH BASIN
- SS — SANITARY SEWER MAIN
- STANDARD PRECAST SEWER MANHOLE
- SIDE SEWER SERVICE W/CLEANOUT
- W — WATER MAIN
- WATER SERVICE (PIPE)
- WATER METER
- FIRE HYDRANT (FH)
- GATE VALVE
- AIR-VAC ASSEMBLY

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MATTHEW J. HOUSER — EXPIRES: 10/6/2022 — 11/12/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PRELIMINARY UTILITY PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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MONROE
WASHINGTON

ENGINEERING DESIGN AND DEVELOPMENT STANDARDS

DEVIATION REQUEST

City of Monroe
806 West Main Street
Monroe, WA 98272
Phone: 360-794-7400
Fax: 360-794-4007
www.monroewa.gov

DEVIATION FROM STANDARDS

Request to deviate from the following design elements *(please check all that apply)*:

Design Standards:	☐ Clearing/Grading	☐ Water Facilities	☐ Sanitary Sewer Facilities	☒ Streets	☐ Other
Surface Water Management:	☐ Erosion & Sediment Control	☐ Storm Facilities	☐ Minimum Requirements	☐ Other	
Engineering Construction Standards:	☐ Construction Standards	☐ Standard Details	☐ Other		

PROJECT INFORMATION

Project Name: Garibaldi PRD **Date:** 11/8/2021

Project Address: 13424, 13624, 12704, 13802 Chain Lake Road Monroe, WA **Zip:** 98272

Parcel No(s): 2807310020-0800, -1600, -3900, -2800, and -2900

Project Number:

Related Applications:

Received

ENGINEER

Company Name: CPH Consultants **Phone:** 425-285-2390

Contact Person: Matt Hough, PE **Email:** matt@cphconsultants.com

Address: 11321-B NE 120th Street **City:** Kirkland **State:** WA **Zip:** 98034

OWNER

Name: Garibaldi Lake, LLC ☐ Individual ☐ Corporation ☐ Partnership ☒ LLC

Contact Person: Melanie Davies **Phone:** 425-576-9390 **Email:** mdavies@westcotthomes.com

Address: 1010 Market Street **City:** Kirkland **State:** WA **Zip:** 98033

APPLICANT

☐ Owner ☐ Owner Agent ☐ Contractor ☒ Engineer ☐ Architect ☐ Other:_____

Company Name: CPH Consultants

Contact Person: Matt Hough, PE **Phone:** 425-285-2390 **Email:** matt@cphconsultants.com

Address: 11321-B NE 120th Street **City:** Kirkland **State:** WA **Zip:** 98034

I certify that I have read this application and declare under penalty of perjury that the information contained herein is correct and complete. I am either the owner of the property on this permit application or I represent the owner as signified above and am acting with the owner's full knowledge and consent.

Signature: Matthew J. Hough Digitally signed by Matthew J. Hough DN: C=US, E=matt@cphconsultants.com, O=CPH Consultants, CN=Matthew J. Hough Date: 2021.11.12 17:34:03-08'00' **Printed Name:** Matt Hough **Date:** 11/12/21

ENGINEERING DESIGN AND DEVELOPMENT STANDARDS

DEVIATION REQUEST

A. Deviation Request:

1. Identify the engineering standard(s) proposed for deviation (include section or drawing numbers):

This Deviation Request proposes a modified cul-de-sac section from City of Monroe (COM) Public Works Design and Development Standards (PWDDS) standard drawing 304 for the on-site cul-de-sac located in the northeast portion of the site.

2. Describe the deviation request, including reasons for the request and why the applicable engineering standard cannot be met. Include site-specific details as applicable.

This Deviation Request proposes a cul-de-sac section with a 45-foot radius right-of-way, 5-foot sidewalk (with the back of walk located along the ROW), and 18-inch rolled curb per WSDOT std. plan F-10.18-02 and no planter strip as shown on the attached Exhibit A. A public road connection to Chain Lake Road in-lieu of the proposed dead end condition is not viable because sight distance at the intersection is not available. In order to be compliant with section 3-2.3 of the COM Design Standards, the length of the private access road serving Lots 1-4 from the cul-de-sac to Lot 1 must be no greater than 150-feet. This restricts the location of the cul-de-sac to where it is shown. The proposed deviation reduces the cul-de-sac right-of-way radius by 10-feet, but its unique design with a rolled curb and concrete sidewalk at back of walk maintains the standard 45-foot paved radius for emergency and large vehicle turning/use. The narrowing of the right-of-way and omission of the planter strip are necessary modifications to the City's standard to fit the pavement area and serve the lots in this irregularly shaped portion of the site.

B. Justification: Deviation requests must include supporting information showing compliance with the following criteria:

3. Describe how the deviation will still achieve the intent of the engineering standard:

The Deviation Request will achieve the intent of the engineering standard because the proposed modified cul-de-sac maintains a radius of 45-ft of paved surface that emergency vehicles can use as a turnaround.

4. Describe how the deviation will not adversely affect road safety or operation:

This Deviation Request will not adversely affect road safety or operation because the proposed modified cul-de-sac section maintains all necessary road elements, including the same radius of drivable pavement shown on standard drawing 304.

5. Describe how the deviation will provide substantially equivalent environmental protection:

This Deviation Request will provide slightly improved environmental protection because the proposed modified cul-de-sac section reduces the amount of pavement and pollution generating impervious surface shown on standard drawing 304.

6. Describe how the deviation will not adversely affect road maintenance and associated costs:

This Deviation Request will not adversely affect road maintenance and associated costs because the proposed modified cul-de-sac section reduces the amount of pavement and eliminates the planter strip shown on standard drawing 304.

7. Describe how the deviation will not adversely affect aesthetic appearance of roads or property:

This Deviation Request will not adversely affect aesthetic appearance of the roads or property. The proposed modified cul-de-sac section reduces the amount of pavement and allows for greater sized lots, which should provide at least an equal aesthetic appearance.

C. Recommendation:

- [x] Approved
- [ ] Denied
- [ ] Modified Approval _____

Conditions:

1. 6" concrete for walks
2. WSDOT STD. PLAN F-10.18-02 for rolled curb/gutter as noted on attached sheet.

DESIGN & CONSTRUCTION DIVISION STAFF RECOMMENDATION:

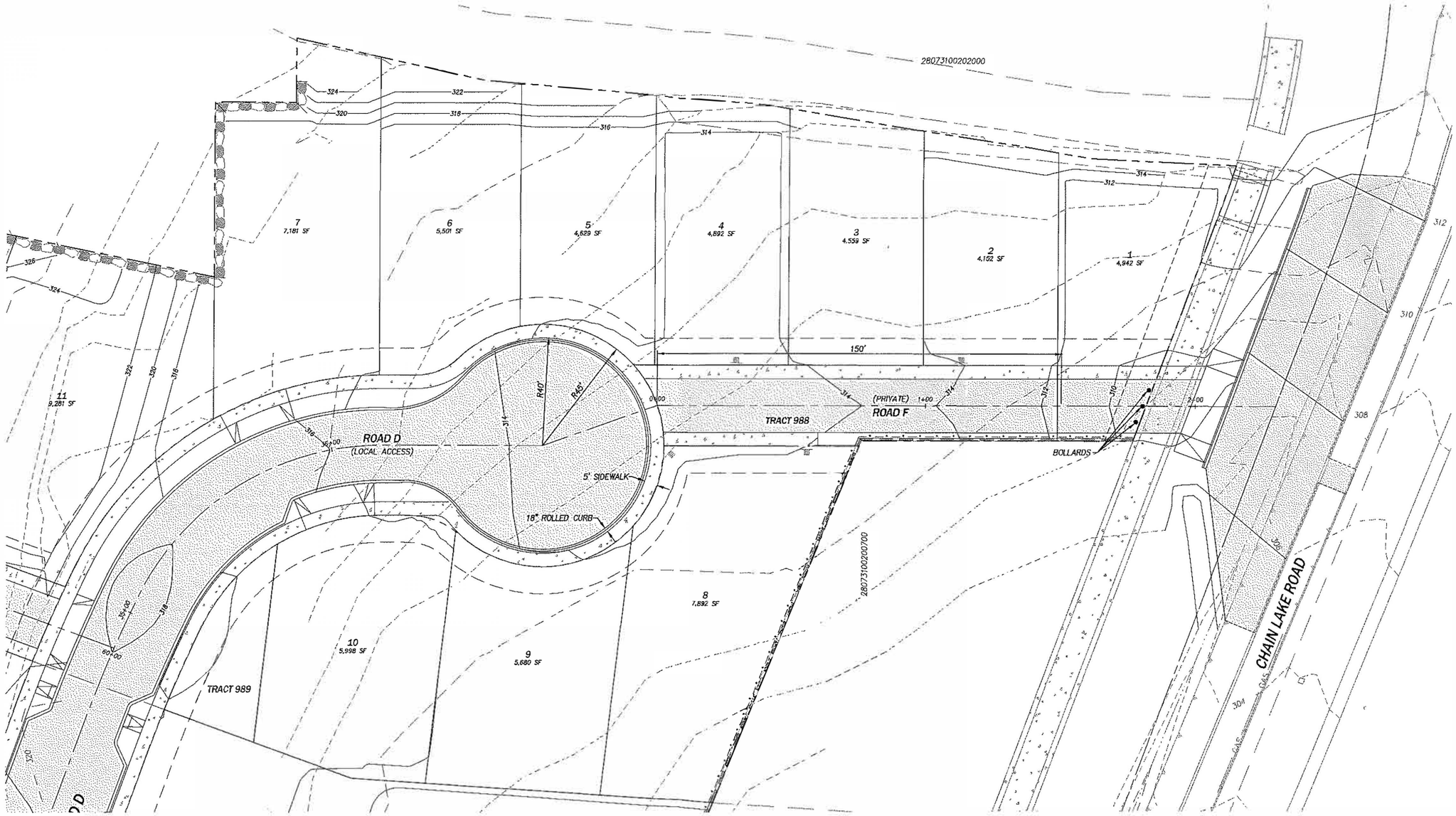
_____ 12/21/21
Development Engineer/Designee Date

D. Decision:

PUBLIC WORKS DEPARTMENT AUTHORIZATION:

- [x] Concur with recommendation
- [ ] Remand to Staff

_____ 12/21/21
City Engineer Date



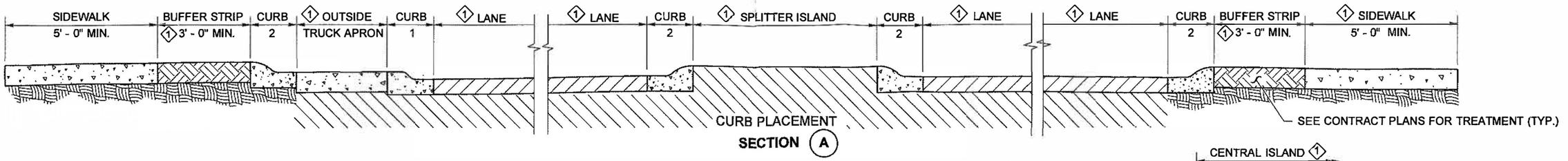
C|P|H
CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2310
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

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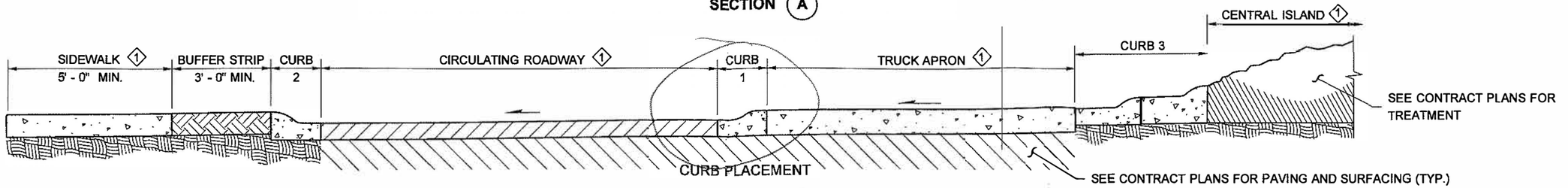
0 20 40
PLAN IN FEET

P:\project\0054\18028\Dwg\Exhibits\Exhibit A_Deviation.dwg
11/12/2021 1:40 PM PETER EVANS

Exhibit A - Garibaldi PRD



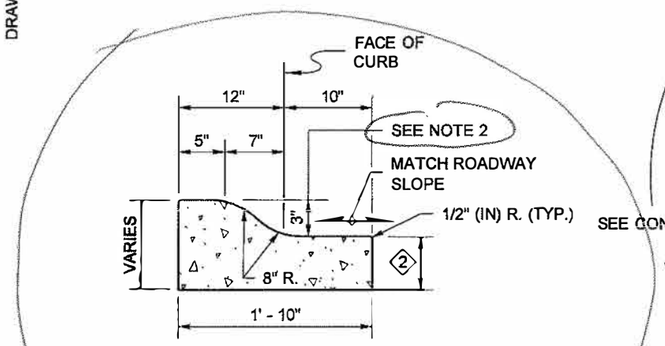
SECTION (A)



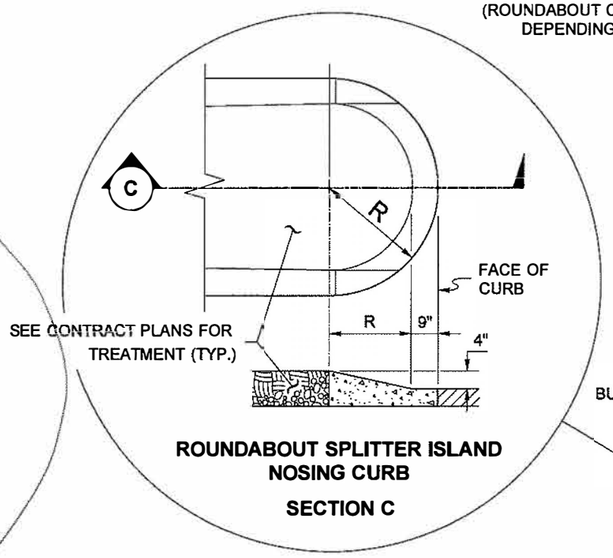
SECTION (B)

(ROUNDABOUT CONFIGURATION WILL VARY DEPENDING ON CONTRACT PLANS)

DRAWN BY: FERN LIDDELL



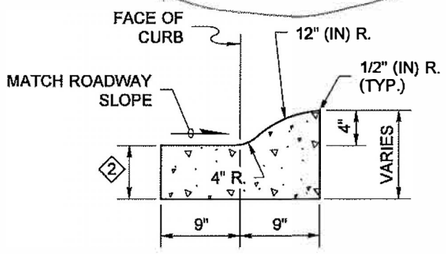
CURB 1
ROUNDABOUT TRUCK APRON
CEMENT CONCRETE CURB & GUTTER
(ROLLED CURB)



ROUNDABOUT SPLITTER ISLAND
NOSING CURB

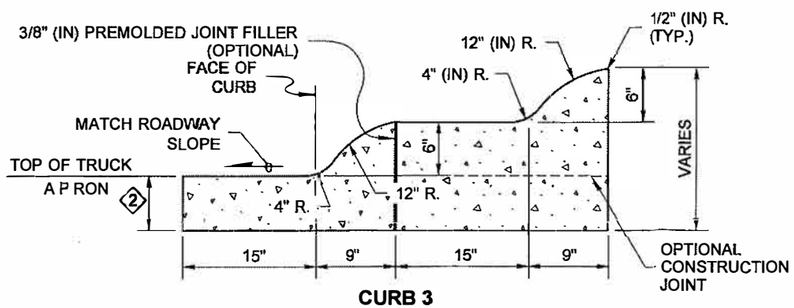
SECTION C

DETAIL
(SEE CONTRACT PLANS FOR **R**)

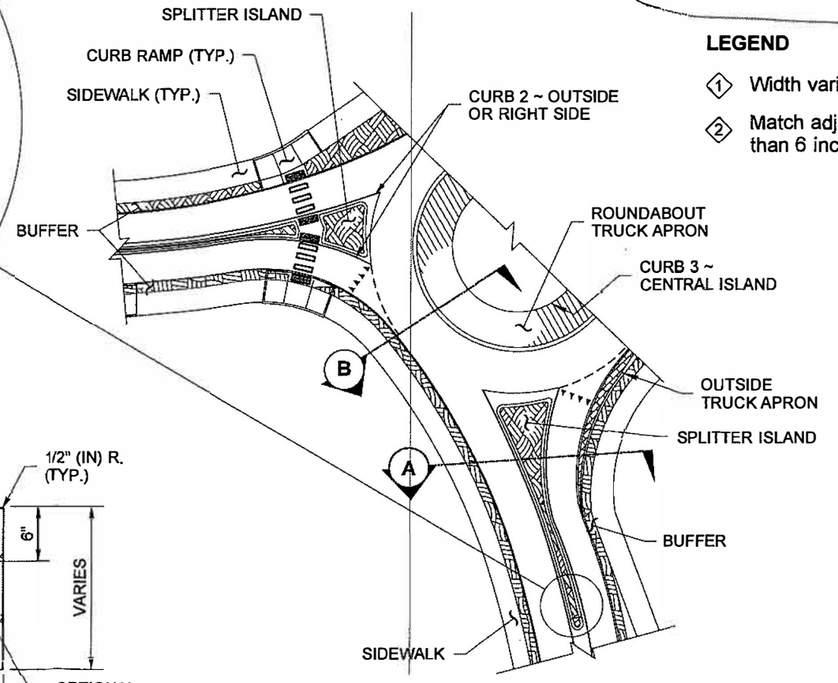


CURB 2
(OUTSIDE, RIGHT SIDE OR SPLITTER ISLAND)

ROUNDABOUT CEMENT CONCRETE
CURB AND GUTTER
(ROLLED CURB)



CURB 3
ROUNDABOUT CENTRAL ISLAND
CEMENT CONCRETE CURB
(ROLLED CURB)



PARTIAL PLAN

NOTES

1. Construct curb joints at cement concrete pavement transverse joint locations. If all adjacent pavement is HMA, see **Standard Plan F-30.10** for Curb Expansion and Contraction Joint Spacing.
2. A 2 inch vertical curb may be used where low clearance vehicles or trucks are present.

LEGEND

1 Width varies ~ See Contract Plans.

2 Match adjacent pavement thickness but not less than 6 inches.

BRIAN J. WALSH
STATE OF WASHINGTON
36103
REGISTERED
PROFESSIONAL ENGINEER

Walsh, Brian
Sep 23 2020 1:20 PM
cosign

ROUNDABOUT CEMENT CONCRETE CURBS

STANDARD PLAN F-10.18-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Date: 2020.09.24 07:58:20 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

Office Use: DR#_____

MONROE
WASHINGTON

ENGINEERING DESIGN AND DEVELOPMENT STANDARDS

DEVIATION REQUEST

City of Monroe
806 West Main Street
Monroe, WA 98272
Phone: 360-794-7400
Fax: 360-794-4007
www.monroewa.gov

DEVIATION FROM STANDARDS

Request to deviate from the following design elements ***(please check all that apply):***

Design Standards:	☐ Clearing/Grading	☐ Water Facilities	☐ Sanitary Sewer Facilities	☒ Streets	☐ Other
Surface Water Management:	☐ Erosion & Sediment Control	☐ Storm Facilities	☐ Minimum Requirements	☐ Other	
Engineering Construction Standards:	☐ Construction Standards	☒ Standard Details	☐ Other		

PROJECT INFORMATION

Project Name: Garibaldi PRD **Date:** May 5, 2021

Project Address: Not Yet Assigned - Chain Lake Rd. **Zip:** 98272

Parcel No(s):

Project Number:

Related Applications:

ENGINEER

Company Name: CPH Consultants **Phone:** (425) 285-2391

Contact Person: Matt Hough, P.E. **Email:** Mat t@cphonsultants.com

Address: 11321-B NE 120th St. **City:** Kirkland **State:** WA **Zip:** 98034

Received

OWNER

Name: Westcott Homes ☐ Individual ☐ Corporation ☐ Partnership ☐ LLC

Contact Person: Melanie Davies **Phone:** (425) 293-4412 **Email:** mdavies@westcotthomes.com

Address: 1010 Market Street **City:** Kirkland **State:** WA **Zip:** 98033

APPLICANT

☐ Owner ☐ Owner Agent ☐ Contractor ☒ Engineer ☐ Architect ☐ Other:

Company Name: Same info. as Engineer

Contact Person: **Phone:** **Email:**

Address: **City:** **State:** **Zip:**

I certify that I have read this application and declare under penalty of perjury that the information contained herein is correct and complete. I am either the owner of the property on this permit application or I represent the owner as signified above and am acting with the owner's full knowledge and consent.

See attached letter

Signature: **Printed Name:** **Date:**

ENGINEERING DESIGN AND DEVELOPMENT STANDARDS

DEVIATION REQUEST

A. Deviation Request:

1. Identify the engineering standard(s) proposed for deviation (include section or drawing numbers):

See attached letter

2. Describe the deviation request, including reasons for the request and why the applicable engineering standard cannot be met. Include site-specific details as applicable.

See attached letter

B. Justification: Deviation requests must include supporting information showing compliance with the following criteria:

3. Describe how the deviation will still achieve the intent of the engineering standard:

See attached letter

4. Describe how the deviation will not adversely affect road safety or operation:

See attached letter

5. Describe how the deviation will provide substantially equivalent environmental protection:

See attached letter

6. Describe how the deviation will not adversely affect road maintenance and associated costs:

See attached letter

7. Describe how the deviation will not adversely affect aesthetic appearance of roads or property:

See attached letter

C. Recommendation:

☒ Approved

☐ Denied

☐ Modified Approval _____

Conditions:

(1) The bump-out parking bays must be designed so that the City street sweepers can clean the corners of the curb/gutter. ~~This may require the angle of the curb/gutter to be less acute than shown on the preliminary civil plans submitted in March, 2021.~~

(2) The longitudinal gutter flowline slope must be 2% or greater in all bump-out parking bays to improve self-cleaning of debris.

DESIGN & CONSTRUCTION DIVISION STAFF RECOMMENDATION:

12/21/21

Development Engineer/Designee Date

D. Decision:

PUBLIC WORKS DEPARTMENT AUTHORIZATION:

☒ Concur with recommendation

☐ Remand to Staff

12/21/21

City Engineer Date

RECEIVED 05/05/2021

C|P|H
CONSULTANTS

Site Planning
Civil Engineering
Landscape Architecture
Land Use Consulting
Project Management

May 5, 2021

Mr. Brad Feilberg, PE
Public Works Director
City of Monroe
806 West Main Street
Monroe, WA 98272

Re: ***Garibaldi PRD — CPH Project No. 0054-18-028***
Engineering Design and Development Standards Deviation Request
Justification for Reduced On-site Local Access and Collector Road Section

Mr. Feilberg,

The *Garibaldi* project is a proposed Planned Residential Development (PRD) conforming with the provisions of City of Monroe municipal code (MMC) 18.84.120. This new 90-lot residential community will occupy an assemblage of three real parcels totaling approximately 17.85 acres in the City of Monroe, Washington. Development of the project is proposed in general accordance with current City of Monroe Public Works Design and Construction Standards (PWDCS; 2000). Circulation and site layout for the project is highly constrained by existing encumbrances of the site that include significant topographic relief, a regional utility easement, and wetland/stream critical areas. The project is therefore proposing a right-of-way and pavement section for the onsite local access and collector roads (Roads A and B) that is slightly reduced from the standard widths provided by PWDCS standard drawings 300 and 301. Allowance of this modified road section will limit impacts to onsite critical areas and mitigate the significant limitations resulting from the existing easement corridor and topography.

EXISTING SITE CONSTRAINTS

An onsite wetland (Wetland A) and short stream reach (Stream I) occupy the lower, southeastern portion of the site. The wetland has been delineated and classified as a Category III with a standard 75-foot buffer and the stream is unclassified with a buffer that is encompassed completed by that of Wetland A. The wetland, stream, and their associated buffers encumber approximately 1.2 acres (50,982 square feet) of the existing site in the vicinity of its southerly frontage with Chain Lake Road.

The site has public right-of-way frontage along the west side of Chain Lake Road at two locations. Only the southerly one of these frontages provides the necessary horizontal clearances to meet the City's sight distance standards. A topographic knoll with significant elevation relief is also located at this south frontage along with a large portion of the onsite Wetland A and its buffer. These physical constraints and proximity of the wetland and buffer critical areas result in a steep roadway connection with unavoidable impacts to the critical area buffer.

An existing 100-foot wide utilities easement for future Puget Sound Energy (PSE) electricity transmission facilities encumbers the central portion of the site. This easement prohibits any structures or other items deemed by PSE to not be compatible with its intended use and future towers and overhead lines. This effectively reduces the developable area of the site by 1.6 acres (70,445 square feet). Park and recreation areas have been located to coincide with the PSE easement area. So, while it may not be unusable area, its limitation and location through the middle of the site limits road patterns and residential lot locations. Stormwater facilities—vault or pond—could not be sited within the PSE easement area because they would potentially conflict with future PSE facilities and because the location such future PSE facilities are not known (and cannot be planned around).

The PSE easement and critical areas of Wetland A reduce the total developable area of the site by approximately 2.79 acres (121,427 square feet), or nearly 15.6 percent of the total site area.

FLEXIBILITY OF STANDARDS AND PUBLIC BENEFITS

Provisions of the City's PRD code allow for flexibility in the application of certain development standards to protect and enhance environmental features and/or where they may provide other public benefits. City of Monroe PWDCS section 1-3 also allows for modifications to development standards where it can be shown that those are in the public interest based on sound engineering judgement, and without any adverse effect on safety, function, appearance, or maintenance. This correspondence and attached Deviation Request form provide that necessary justification.

The City's typical local access road has a pavement width of 36 feet and right-of-way of 60 feet. The project proposes a modified local access road that would reduce the standard right-of-way section to 52 feet. This modified section would have a pavement width 34.5 feet where parallel parking is one side only and 28 feet where no dedicated parallel parking area exists. This section would maintain two travel lanes that are equal to or, in most instances, wider than the City's current standard. There would be no change in the required standard 5-foot width of the sidewalks nor in the 6.5' separation of the walk from the back of curb where parking pullouts are not provided. As such, the proposed roadway section would not adversely affect or alter the general appearance and safety and the function would be maintained with two standard vehicular travel lane widths.

Available on-street parking would be reduced slightly with the proposed roadway section. The project will provide approximately 4,853 lineal feet of local access roadway onsite. Dedicated parallel parking areas are dispersed throughout the community and provide a minimum of 45 standard on-street parking spaces available to the community and their visitors. This works out to be 0.50 parking spaces per unit. Each residential lot would have a driveway that would also provide 2 off-street parking stalls plus 2 more spaces within the garages of each house. Even if each house only used one of the garage spaces, the available on-street and off-street parking would equate to 3.5 spaces per lot.

The following is a summary of the public benefits provided by the project's proposed reduction in the typical Local Access roadway width and its compliance with the criteria for public benefit without adverse effect on safety, function, appearance, or maintenance of the facility:

Reduced Pavement Surface for Low Impact Development – A reduced roadway width directly results in less pavement surface. Limiting pollution generating impervious surfaces is an effective low impact development (LID) method for surface water management. The reduced impervious coverage results in lower peak runoff rates and volumes, and less potential pollution contributions to onsite treatment facilities and, ultimately, downstream systems.

The City's municipal code emphasize the priority of implementing effective LID measures in the storm water systems of new development. The soils and topography of this particular site limit the opportunities for other storm water LID measures, but reduced pavement area is a practical and achievable LID measure that can be accomplished with this project. It is also achieved without any adverse impact to safety, function, or maintenance.

Reduced Road Width for Improved Pedestrian Safety – The reduced roadway width makes no change in sidewalk width or locations. Sidewalks would be provided on each side of the road and these would remain separated from the vehicular travelled way by a standard 6.5-foot wide planter strip. The reduced roadway pavement width also shortens the pedestrian crossing lengths at intersections and

encourages slower vehicular speeds. All of these factors/features combine for improved pedestrian safety.

Reduced Critical Area Impacts – The 8-foot reduction in right-of-way and other reductions in pavement widths proposed by the project and this Deviation Request result in the preservation of approximately 6,700 square feet more buffer area at Wetland A.

Reduced Road Width Improves Site Grading and Earthwork – The topographic challenges of the site combined with the onsite wetland and its buffers and the encumbrance of the 100-foot wide PSE power easement through the center of the site limit and segment the available developable area for public roads and residential lots. The roadway patterns and residential lot layout has been carefully designed to optimize the available development area. With with that, the encumbrances and irregular shapes of the remaining developable area still require retaining walls or slopes or some combination of those in the rear yards and side yards of the lots. The reduced roadway widths provide additional depth and width to the lots to mitigate the heights of retaining walls. This improves not only the aesthetic of the project, but also reduces the potential for future maintenance and repairs of these walls—some of which occur adjacent to the public right-of-way.

STANDARDS DEVIATION JUSTIFICATION CRITERIA

The following are statements of how the proposal conforms to the City's required justification criteria for an Engineering Design and Development Standards Deviation Request:

1. Describe how the deviation will still achieve the intent of the engineering standard.

   Response: The intent of the standard roadway section is to provide a safe and functional public roadway for vehicular and pedestrian traffic. This standard includes parking at its edge. The project proposes to reduce the standard right-of-way section by 8 feet and the pavement width by 1.5 feet and 8 feet where parking is one side only or no parking exists, respectively. Locations where parking is provided at both sides will result in a pavement width greater than the standard. Granting this deviation would provide minimum 12.5-foot vehicular travel lanes that exceed the 10-foot standard prescribed by PWDCS drawings 300 and 301. No modification to the standard pavement materials or depths is proposed.

2. Describe how the deviation will not adversely affect road safety or operation.

   Response: The vehicular travel lanes and sidewalk widths prescribed by PWDCS drawings 300 and 301 would be maintained by allowance of the requested deviation. No modification to the standard pavement materials or depths is proposed. The proposed onsite roadway geometry—horizontal and vertical curvatures—conforms with applicable City standards. As such, allowance for this deviation will not adversely affect road safety, operation, or function.

3. Describe how the deviation will provide substantially equivalent environmental protection.

   Response: The proposed reduction of the right-of-way and pavement surfacing will provide superior environmental protection by increasing the native buffer area at Wetland A and reduction of pollution generating impervious surfaces.

4. Describe how the deviation will not adversely affect the road maintenance and associated costs.

   Response: The vehicular travel lanes and sidewalk widths prescribed by PWDCS drawings 300 and 301 would be maintained by allowance of the requested deviation. No modification to the standard pavement

materials or depths is proposed. As such, there would be no reduction in the life cycle of the pavement or adverse effect on future maintenance requirements or costs. The reduced amount of roadway pavement would result in an overall lowering of future maintenance costs compared with the wider standard section.

5. Describe how the deviation will not adversely affect aesthetic appearance or property.

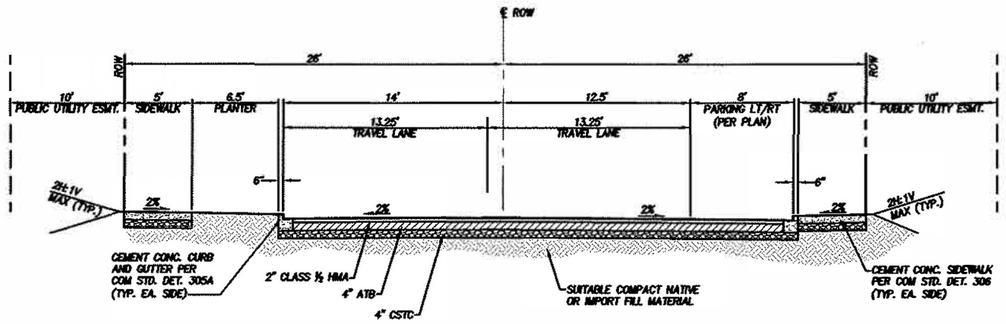
   Response: The minor reduction in pavement width will not change the aesthetic or likely be noticed by the typical user of the facility. The reduced section will allow for additional areas of landscape in front and side yard areas on the residential lots and recreation tracts, and will maintain more natural vegetation in the buffer around Wetland A. Therefore, the reduced pavement and right-of-way section will improve the aesthetic appearance of the community and property.

Please contact me directly at (425) 285-2391 or by e-mail at matt@cphconsultants.com if you have questions or need any additional information to complete your review and approval of the requested reduction in the pavement right-of-way and pavement widths for the onsite local access and collector roads for the project. Your time, efforts, and consideration are appreciated. Thank you.

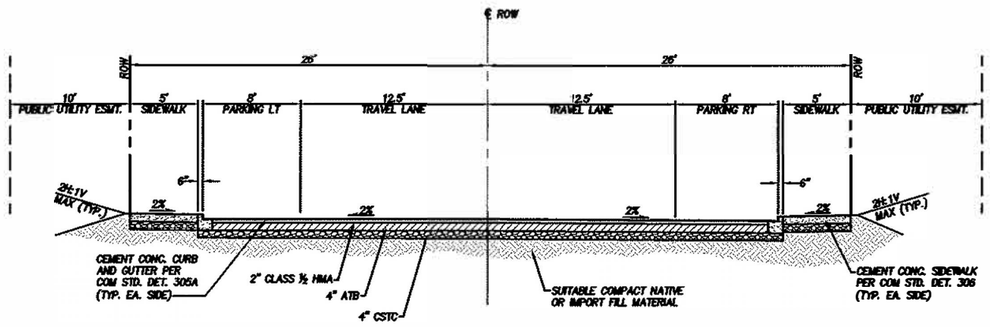
Sincerely,
CPH Consultants

Matthew Hough, PE
President

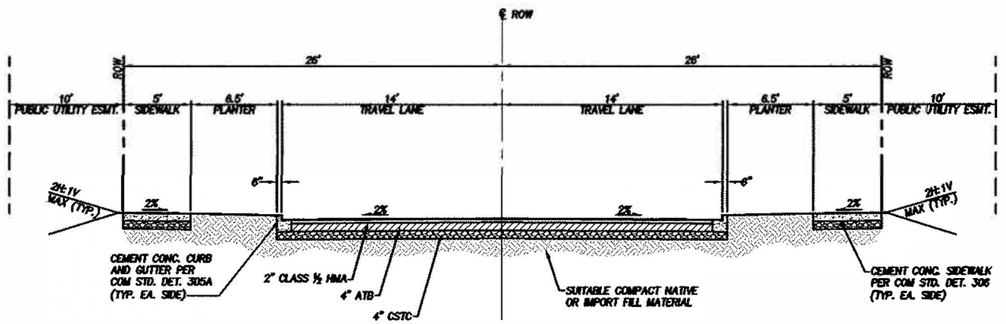
Enclosures
Cc: Ms. Melanie Davies (Garibaldi Lake, LLC)
copy to file



PARALLEL PARKING ONE SIDE



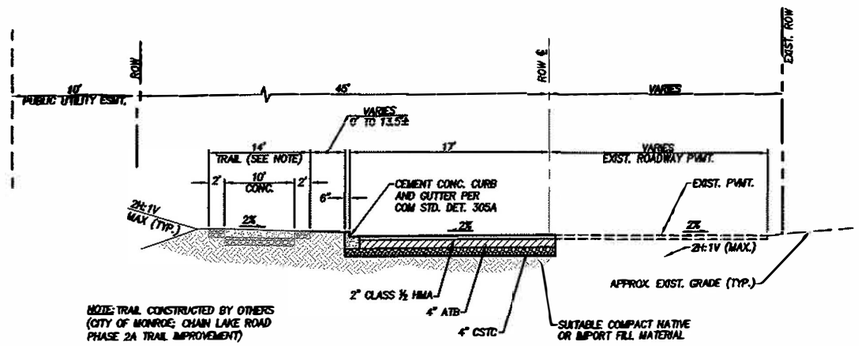
PARALLEL PARKING EACH SIDE



STANDARD

A P2.00 **TYPICAL ROAD SECTION - LOCAL ACCESS**

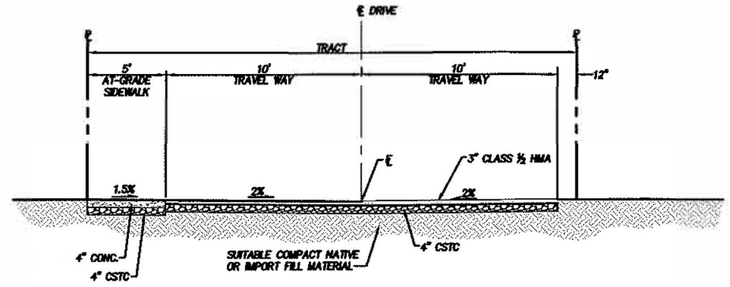
NOT TO SCALE (PUBLIC; ON-STREET PARKING CONDITIONS PER PLAN)



NOTE: TRAIL CONSTRUCTED BY OTHERS (CITY OF MONROE; CHAIN LAKE ROAD PHASE 2A TRAIL IMPROVEMENT)

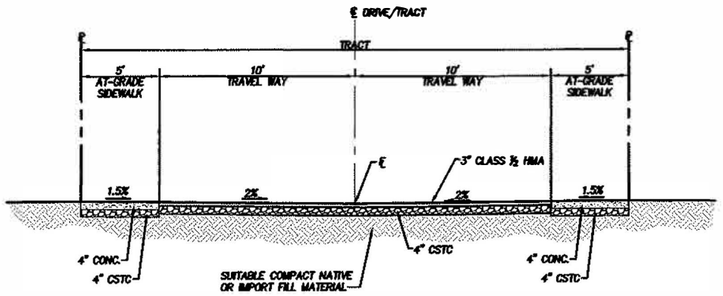
B P2.00 **TYPICAL ROAD SECTION - CHAIN LAKE ROAD**

NOT TO SCALE (PUBLIC, MAJOR COLLECTOR)



C P2.00 **TYPICAL ROAD SECTION - TRACT 987**

NOT TO SCALE (PRIVATE ACCESS)



D P2.00 **TYPICAL ROAD SECTION - PRIVATE ACCESS**

NOT TO SCALE (PRIVATE ROAD)

RECEIVED 05/05/2021

NO.	DATE	REVISION	BY	CH.
1	3/05/21	PRELIMINARY PRD RESUBMITTAL	PCE	MJH

MATTHEW J. HEDGE — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER — 05/05/2021

PRELIMINARY SUBDIVISION AND PRD APPLICATION

GARIBALDI PRD

TYPICAL ROADWAY SECTIONS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
18321 NE 112th Ct
Kirkland, WA 98034 • (425) 285-2310
103 South Washington Avenue, Suite C1
Centralia, WA 98531 • (360) 263-7701
www.cphconsultants.com

PROJECT NO. 0054-18-028

DRAWING P2.10

SHEET 5 OF 25

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

P:\projects\0054\18#28\Dwg\Sheets\Preliminary Plat\P2.10.dwg
3/8/2021 11:58 PM MATT HOUGH

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

PROJECT INFORMATION

SNOHOMISH CO. TAX PARCEL NO.	PARCEL AREA	
28073100000800	8.94 AC	389,232 SF
28073100001600	2.69 AC	117,344 SF
28073100003900	2.17 AC	94,534 SF
28073100002800	1.96 AC	85,386 SF
28073100002900	2.09 AC	90,952 SF
TOTAL SITE AREA	17.85 AC	777,448 SF

	94 - PRD
MINIMUM DENSITY	n/a
MINIMUM NO. LOTS	
BASE DENSITY	4.00 DU/AC
BASE ALLOWABLE NO. LOTS	71
MAXIMUM (PRD) DENSITY	5.20 DU/AC
MAXIMUM ALLOWABLE NO. LOTS	93
PROPOSED RESIDENTIAL LOTS	90
MINIMUM LOT AREA REQUIRED	n/a
MINIMUM LOT WIDTH REQUIRED	30 FT
MAXIMUM LOT COVERAGE ALLOWED	60 FT
MAXIMUM BUILDING HEIGHT ALLOWED	35 FT
FRONT YARD SETBACK	10 FT
GARAGE SETBACK	20 FT
SIDE YARD SETBACK	5 FT
REAR YARD SETBACK	10 FT
MINIMUM LOT SIZE PROPOSED	3,282 SF
MINIMUM LOT WIDTH PROPOSED	40 FT
AVERAGE LOT AREA PROPOSED	4,753 SF
MAXIMUM LOT SIZE PROPOSED	9,003 SF
RESIDENTIAL LOT MIX (MMC 18.84.080.D)	35.6% ≤ 4,000 SF
	36.7% 4,001 TO 5,000 SF
	27.8% > 5,000 SF
REQUIRED PARK AND REC. OPEN SPACE:	900 SF/DU 64,252 SF
PARK AND RECREATION OPEN SPACE PROVIDED:	
TRACT 990	25,562 SF
TRACT 993	31,332 SF
TRACT 995	9,572 SF
TOTAL CENTRAL PARK	66,467 SF
TRACT 996	25,471 SF
TOTAL PARK/RECREATION OPEN SPACE	91,938 SF
OTHER ADDITIONAL OPEN SPACE AREAS:	
Tract 999, CRITICAL AREA OPEN SPACE	81,159 SF
Tract 998, LANDSCAPE COMMON AREA	1,935 SF
Tract 997, LANDSCAPE COMMON AREA	7,810 SF
Tract 988, LANDSCAPE COMMON AREA	4,269 SF
TOTAL OTHER OPEN SPACE AREAS	95,173 SF
TOTAL PARK/RECREATION OPEN SPACE	187,111 SF 4.30 AC

UTILITY PURVEYORS AND PUBLIC SERVICE PROVIDERS

WATER	CITY OF MONROE
SANITARY SEWER	CITY OF MONROE
STORM DRAINAGE	CITY OF MONROE
FIRE DISTRICT	FIRE DISTRICT NO. 7
SCHOOL DISTRICT	MONROE SCHOOL DIST. NO. 103
POWER (ELECTRICITY)	PUGET SOUND ENERGY
NATURAL GAS	PUGET SOUND ENERGY

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

SURVEY DATA

EXISTING BOUNDARY, TOPOGRAPHIC, AND PLANIMETRIC INFORMATION SHOWN ON THIS PLAN AND OTHERS IN THIS SET WERE USED AS A BASIS FOR DESIGN AND REPRESENT FIELD SURVEY DATA AND MAPPING PREPARED BY MEAD GILMAN LAND SURVEYORS (JOB NO. 131.20), AS PROVIDED BY THE PROJECT OWNER, AND DOES NOT REPRESENT WORK BY CPH CONSULTANT (SEE COVER SHEET FOR LEGAL DESCRIPTION).

RIGHT-OF-WAY ALIGNMENT DATA

LINE TABLE			LINE TABLE			CURVE TABLE			
LINE #	LENGTH	DIRECTION	LINE #	LENGTH	DIRECTION	CURVE #	Δ	RADIUS	LENGTH
L1	93.15'	N59°31'14"W	L10	43.26'	N11°07'50"W	C1	N73°57'52"W	165.00'	83.19'
L2	32.44'	N88°24'30"W	L11	219.31'	S89°14'07"E	C2	S14°23'33"W	100.00'	87.37'
L3	133.61'	S39°25'15"W	L12	130.26'	N20°10'29"E	C3	N87°54'28"W	50.00'	91.93'
L4	54.09'	N35°14'12"W	L13	40.56'	N25°38'17"E	C4	N22°56'10"W	165.00'	70.85'
L5	160.25'	N10°38'08"W	L14	111.17'	N47°28'51"E	C5	N4°57'46"W	165.00'	32.67'
L6	660.35'	N0°42'36"E	L15	176.96'	N69°49'31"W	C6	N4°57'46"W	165.00'	32.67'
L7	194.01'	N0°10'56"E	L16	55.00'	N62°21'41"W	C7	N5°12'37"W	51.00'	10.54'
L8	140.01'	N10°38'08"W	L17	292.99'	N89°49'04"W	C8	N55°28'11"E	86.00'	105.95'
L9	219.45'	N0°42'36"E				C9	N22°54'23"E	474.00'	45.20'
						C10	N36°33'34"E	61.00'	23.25'

RECEIVED 05/05/2021

NO.	DATE	REVISION	BY	CK.
1	3/05/21	PRELIMINARY PRD RESUBMITTAL	PDF	MJH

MATTHEW J. HOUCK — STATE OF WASHINGTON — 21615 — REGISTERED PROFESSIONAL ENGINEER — 05/05/2021

GARIBALDI PRD

PRELIMINARY SUBDIVISION AND PRD APPLICATION

PRELIMINARY PLAT PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11232 - 8 NE 120th Place
Kirkland WA 98034 • (425) 285-2280
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www.cphconsultants.com

PROJECT NO. 0054-18-028

DRAWING P2.00

SHEET 4 OF 25

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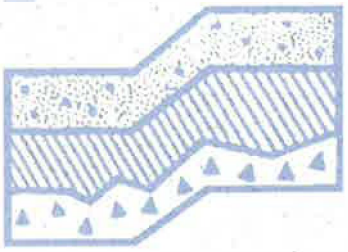
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EXHIBIT 15-A

GEOTECHNICAL REPORT

Garibaldi Property
13424 and 13624 Chain Lake Road
Monroe, Washington

Project No. T-8079



Terra Associates, Inc.

Prepared for:

Garibaldi Lake, LLC
Kirkland, Washington

December 14, 2018

TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

December 14, 2018
Project No. T-8079

Ms. Melanie Davies
Garibaldi Lake, LLC
1010 Market Street
Kirkland, Washington 98033

Subject: Geotechnical Report
Garibaldi Property
13424 and 13624 Chain Lake Road
Monroe, Washington

Dear Ms. Davies:

As requested, we conducted a geotechnical engineering study for the subject project. The attached report presents our findings and recommendations for the geotechnical aspects of project design and construction.

Our study indicates the site soils predominantly consist of glacial till deposits comprised of weathered and unweathered horizons of silty sand with gravel. Perched groundwater seepage was observed at depths of two to four feet in nine of the ten of the test pits excavated at the site.

In our opinion, there are no geotechnical conditions that would preclude the planned residential development. Buildings can be supported on conventional spread footings bearing on competent native soils or on structural fill placed on competent native soils. Floor slabs and pavements can be similarly supported.

Detailed recommendations addressing these issues and other geotechnical design considerations are presented in the attached report. We trust the information presented is sufficient for your current needs. If you have any questions or require additional information, please call.

Sincerely yours,
TERRA ASSOCIATES, INC.

Kevin P. Roberts, P.E.
Geotechnical Engineer

Theodore J. Schepper, P.E.
President

THEODORE J. SCHEPPER
STATE OF WASHINGTON
26742
REGISTERED
PROFESSIONAL ENGINEER

12-14-18

12220 113th Avenue NE, Ste. 130, Kirkland, Washington 98034
Phone (425) 821-7777 • Fax (425) 821-4334

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Geotechnical Report
Garibaldi Property
13424 and 13624 Chain Lake Road
Monroe, Washington

1.0 PROJECT DESCRIPTION

We were provided Conceptual Site Plan prepared by CP|H Consultants, dated November 27, 2018. The site plan indicates the project consists of the construction of 61 residential building lots along with associated infrastructure improvements. A new roadway leading westward from Chain Lake Road will access the development. Based on an email from CP|H Consultants dated November 28, 2018, project stormwater will be directed to a single on-site detention vault facility located at the sites' southeast boundary. The moderately rolling site topography indicates that moderate grading will be required to achieve building and roadway elevations. We anticipate a combination of permanent cut and fill slopes and retaining walls will be used to achieve finished site grades.

We expect that the residential structures will be one- to two-story, wood-frame buildings, with their main floors framed over a crawl space or constructed at grade. Foundation loads should be relatively light, in the range of 2 to 3 kips per foot for bearing walls and 20 to 40 kips for isolated columns.

The recommendations contained in the following sections of this report are based on our understanding of the above design features. We should review design drawings as they become available to verify that our recommendations have been properly interpreted and incorporated into project design and to amend or supplement our recommendations, if required.

2.0 SCOPE OF WORK

We explored subsurface conditions at the site by observing conditions in ten test pits excavated to a maximum depth of 10 feet below existing surface grades using a track-mounted mini-excavator. Based on the results of our field study, laboratory testing, and analyses, we developed geotechnical recommendations for project design and construction. Specifically, this report addresses the following:

- Soil and groundwater conditions
- Geologic Hazards per Monroe Municipal Code
- Seismic design parameters per the current International Building Code (IBC)
- Site preparation and grading
- Excavations
- Foundations
- Slab-on-grade floors
- Infiltration feasibility
- Stormwater facilities
- Utilities
- Pavements

It should be noted that recommendations outlined in this report regarding drainage are associated with soil strength, design earth pressures, erosion, and stability. Design and performance issues with respect to moisture as it relates to the structure environment is beyond Terra Associates' purview. A building envelope specialist or contractor should be consulted to address these issues, as needed.

3.0 SITE CONDITIONS

3.1 Surface

The project site consists of 3 tax parcels totaling approximately 14 acres of land located at 13424 and 13624 Chain Lake Road in Monroe, Washington. The approximate location of the site is shown on Figure 1.

A single-family residence with several outbuildings currently occupies the largest northern parcel. This parcel is mainly open and vegetated with short grass. The southern and middle parcels, respectively, contain a single-family residence and greenhouse. These two parcels are primarily wooded with young to mature trees, with brush and lawn near the residence. Each of the parcels is accessed by graveled driveways leading westward from Chain Lake Road.

We observed at ground surface elevation the top surface of a large boulder (glacial erratic) in the vicinity of Test Pit TP-8. Based on its surface appearance, we estimate the buried boulder to be several feet in diameter.

At the northern parcel, existing surface gradients slope gently from northwest to southeast. Topography at the southern parcel is mostly level. A total topographic relief of approximately 90 feet exists from this sites' northwest to southeast corners. No standing or flowing water, springs, zones of emergent groundwater, or indications of soil erosion or instability were seen during our field exploration.

3.2 Soils

The soils observed in the test pits generally consist of about four to ten inches of sod and topsoil overlying weathered and unweathered horizons of glacial till deposits.

Each test pit showed a weathered horizon of till soils extending to depths ranging from 1.5 feet in Test Pit TP-9 to 3.5 feet in Test Pit TP-6. The weathered soils generally consist of silty fine sand and sand/silt with gravel and cobbles. This upper soil horizon has weathered to a medium dense condition.

Unweathered till soils were observed beneath the weathered layer in each test pit. These soils primarily consist of silty sand with variable gravel, cobble, and boulder contents. We observed the lower unweathered soils to be in a dense to very dense condition having varying degrees of cementation. The unweathered till soils were encountered to the total depths of each of our test pits.

The *Surficial Geologic Map of the Skykomish and Snoqualmie Rivers Area, Snohomish and King Counties, Washington,* by D.B. Booth (1990) shows the site underlain by Vashon till (Qvt). The soils we observed in our test pits are consistent with the published description of this soil unit.

Detailed descriptions of the subsurface conditions we observed in the test pits are presented on the Test Pit Logs in Appendix A. The approximate locations of the test pits are shown on Figure 2.

3.3 Groundwater

We observed groundwater seepage in all test pits except Test Pit TP-10. Light to heavy seepage flows were observed at depths ranging from two to four feet. The seepage primarily occurs as interflow, which is seepage perched within the basal portion of a weathered till layer on top of the underlying, relatively impermeable till soils. Observed differential flow rates from walls of the test pits indicate an overall northwest-to-southeast groundwater flow gradient.

Perched groundwater levels and flow rates will fluctuate seasonally, and typically reach their highest levels during and shortly following the wet winter and early spring months (November through April). Accordingly, we expect that the seepage flow rates and levels observed in the test pits were near their seasonal highs.

3.4 Geologic Hazards

We evaluated site conditions for the presence of "geologically hazardous areas" as defined in Section 20.05.120 of the Monroe Municipal Code (MMC). Discussions related to erosion, landslide, and seismic hazards are given below.

3.4.1 Erosion Hazard Areas

Section 20.05.120B.1. of the MMC defines erosion hazard areas as those areas "identified by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as having severe or very severe rill, and inter-rill erosion hazard..."

The NRCS has mapped the site soils as *Tokul gravelly medial loam, 0 to 8 percent slopes* and *Tokul gravelly medial loam, 8 to 15 percent slopes* at the sites' southern northern areas, respectively. The erosion hazard of each of these soil types is described as slight, and therefore, do not meet the above criteria defining an erosion hazard area.

The site soils will be susceptible to erosion when exposed during construction. In our opinion, proper implementation and maintenance of Best Management Practices (BMPs) for erosion prevention and sedimentation control will adequately mitigate the erosion potential in the planned development area. Erosion protection measures as required by the City of Monroe will need to be in place prior to and during grading activity on the site.

3.4.2 Landslide Hazard Areas

We reviewed definitions of Landslide Hazard Areas listed in Section 20.05.120B.2. of the MMC. Based on our field observations, site slope gradients as shown on the site plan, and the inherent high strength of the soils underlying the site, no landslide hazard areas as defined by MMC exist at the site.

3.4.3 Seismic Hazard Areas

Section 20.05.120B.3. of the MMC defines seismic hazard areas as "areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface failure.

Based on the site topography and the presence of glacially consolidated soils, it is our opinion that the risk for damage resulting from earthquake-induced slope failure, settlement, lateral spreading, surface failure, or soil liquefaction is negligible. Therefore, in our opinion, unusual seismic hazard areas do not exist at the site, and design in accordance with local building codes for determining seismic forces would adequately mitigate impacts associated with ground shaking.

3.5 Seismic Design Parameters

Based on the site soil conditions and our knowledge of the area geology, per the 2015 International Building Code (IBC), site class "C" should be used in structural design. Based on this site class, in accordance with the 2015 IBC, the following parameters should be used in computing seismic forces:

Seismic Design Parameters (IBC 2015)

Spectral response acceleration (Short Period), S_{Ms}	1.171 g
Spectral response acceleration (1 – Second Period), S_{M1}	0.602 g
Five percent damped 0.2 second period, S_{Ds}	0.780 g
Five percent damped 1.0 second period, S_{D1}	0.401 g

The above values were determined using the United States Geological Survey (USGS) online ground motion parameter calculator accessed on December 10, 2018.

4.0 DISCUSSION AND RECOMMENDATIONS

4.1 General

Based on our study, there are no geotechnical conditions that would preclude the planned development. In general, structures can be supported on conventional spread footings bearing on competent native soils, or on structural fill placed on the competent native soils. Floor slabs and pavements can be similarly supported.

The majority of the soils at the site contain a sufficient amount of fines (silt- and clay-sized particles) such that they will be difficult to compact as structural fill when too wet or too dry. If grading activities will take place during the winter season, the owner should be prepared to import free-draining granular material for use as structural fill and backfill.

Perched moderate to heavy groundwater seepage flows were observed within the basal portion of the weathered till at some of the test pit locations. Depending on planned site grades, some areas may require the construction interceptor drains to reduce potential seepage impacts to lots and roadways. Specific areas requiring additional subsurface drainage can be determined based on a review of the final grading plans.

Detailed recommendations regarding these issues and other geotechnical design considerations are provided in the following sections of this report. These recommendations should be incorporated into the final design drawings and construction specifications.

4.2 Site Preparation and Grading

To prepare the site for construction, all vegetation, organic surface soils, and demolition debris should be stripped and removed from the site. We expect surface stripping depths of about 4 to 10 inches will be required to remove the topsoil. Organic soils will not be suitable for use as structural fill but may be used for limited depths in nonstructural areas or for landscaping purposes.

Demolition of existing structures should include removal of existing foundations and abandonment of underground septic systems and other buried utilities. Abandoned utility pipes that fall outside of new building areas can be left in place provided they are sealed to prevent intrusion of groundwater seepage and soil. Cut and fill operations can be initiated once clearing and grubbing operations are complete.

A representative of Terra Associates, Inc. should examine all bearing surfaces to verify that conditions encountered are as anticipated and are suitable for placement of structural fill or direct support of building and pavement elements. Our representative may request proofrolling exposed surfaces with a heavy rubber-tired vehicle to determine if any isolated soft and yielding areas are present. If unstable yielding areas are observed, they should be cut to firm bearing soil and filled to grade with structural fill. In pavement areas, if the depth of excavation to remove unstable soils is excessive, use of geotextile fabric such as Mirafi 500X or equivalent in conjunction with clean granular structural fill can be considered in order to limit the depth of removal.

The site soils at the site contain a sufficient amount of fines (silt and clay size particles) that will make them difficult to compact as structural fill if they are too wet or too dry. In addition, laboratory testing and the observed wet condition of the upper till soils indicate they are several percentage points above their optimum moisture contents required for compaction. The ability to use these soils from site excavations as structural fill will depend on their moisture content and the prevailing weather conditions when site grading activities take place. Soils that are too wet to properly compact could be dried by aeration during dry weather conditions, or mixed with an additive such as cement or lime to stabilize the soil and facilitate compaction. If an additive is used, additional Best Management Practices (BMPs) for its use will need to be incorporated into the Temporary Erosion and Sedimentation Control (TESC) plan for the project.

We recommend removing cobbles larger than six inches and boulders from the fill prior to placement and compaction.

If grading activities are planned during the wet winter months, or if they are initiated during the summer and extend into fall and winter, the owner should be prepared to import wet weather structural fill.

For this purpose, we recommend importing a granular soil that meets the following grading requirements:

U.S. Sieve Size	Percent Passing
6 inches	100
No. 4	75 maximum
No. 200	5 maximum*

*Based on the 3/4-inch fraction.

Prior to use, Terra Associates, Inc. should examine and test all materials imported to the site for use as structural fill.

Structural fill should be placed in uniform loose layers not exceeding 12 inches and compacted to a minimum of 95 percent of the soil's maximum dry density, as determined by American Society for Testing and Materials (ASTM) Test Designation D-698 (Standard Proctor). The moisture content of the soil at the time of compaction should be within two percent of its optimum, as determined by this ASTM standard. In nonstructural areas, the degree of compaction can be reduced to 90 percent.

4.3 Excavations

All excavations at the site associated with confined spaces, such as utilities and lower building level retaining walls, must be completed in accordance with local, state, and federal requirements. Based on the Washington State Safety and Health Administration (WSHA) regulations, the sites' upper medium dense soils would be classified as Type C soils. The dense to very dense, cemented till soils would be classified as Type A soils.

Accordingly, for temporary excavations of more than 4 feet and less than 20 feet in depth, the side slopes in Type C soils should be laid back at a slope inclination of 1.5:1 (Horizontal:Vertical) or flatter. If there is insufficient lateral space to complete the excavations in the manners discussed above, or if excavations greater than 20 feet deep are planned, you may need to use temporary shoring to support the excavations.

For Type A soils, side slopes can be laid back at a slope inclination of 0.75:1 or flatter. For temporary excavation slopes less than 8 feet in height in Type A soils, the lower 3.5 feet can be cut to a vertical condition, with a 0.75:1 slope graded above. For temporary excavation slopes greater than 8 feet in height up to a maximum height of 12 feet, the slope above the 3.5-foot vertical portion will need to be laid back at a minimum slope inclination of 1:1.

Deep excavations that expose perched seepage in till can likely be dewatered by conventional sump-pumping procedures along with a system of collection trenches. Temporary dewatering trenches upgradient of excavations may also be considered in areas of heavy interflow seepage.

The above information is provided solely for the benefit of the owner and other design consultants and should not be construed to imply that Terra Associates, Inc. assumes responsibility for job site safety. It is understood that job site safety is the sole responsibility of the project contractor.

4.4 Foundations

Residential structures may be supported on conventional spread footing foundations bearing on competent native soils or on structural fill placed above the native soils. Foundation subgrades should be prepared as recommended in Section 4.2 of this report.

Perimeter foundations exposed to the weather should bear at a minimum depth of 1.5 feet below final exterior grades for frost protection. Interior foundations can be constructed at any convenient depth below the floor slab. We recommend designing foundations for a net allowable bearing capacity of 2,500 pounds per square foot (psf). For short-term loads, such as wind and seismic, a one-third increase in this allowable capacity can be used in design. With the anticipated loads and this bearing stress applied, building settlements should be less than one-half inch total and one-fourth inch differential.

For designing foundations to resist lateral loads, a base friction coefficient of 0.35 can be used. Passive earth pressure acting on the sides of the footings may also be considered. We recommend calculating this lateral resistance using an equivalent fluid weight of 300 pounds per cubic foot (pcf). We recommend not including the upper 12 inches of soil in this computation because they can be affected by weather or disturbed by future grading activity. This value assumes the foundations will be constructed neat against competent native soil or the excavations are backfilled with structural fill, as described in Section 4.2 of this report. The recommended passive and friction values include a safety factor of 1.5.

4.5 Slab-on-Grade Floors

Slab-on-grade floors may be supported on a subgrade prepared as recommended in Section 4.2 of this report. Immediately below the floor slab, we recommend placing a four-inch thick capillary break layer composed of clean, coarse sand or fine gravel that has less than three percent passing the No. 200 sieve. This material will reduce the potential for upward capillary movement of water through the underlying soil and subsequent wetting of the floor slab.

The capillary break layer will not prevent moisture intrusion through the slab caused by water vapor transmission. Where moisture by vapor transmission is undesirable, such as covered floor areas, a common practice is to place a durable plastic membrane on the capillary break layer and then cover the membrane with a layer of clean sand or fine gravel to protect it from damage during construction, and aid in uniform curing of the concrete slab. It should be noted that if the sand or gravel layer overlying the membrane is saturated prior to pouring the slab, it will be ineffective in assisting uniform curing of the slab, and can actually serve as a water supply for moisture transmission through the slab that can subsequently affect floor coverings. Therefore, in our opinion, covering the membrane with a layer of sand or gravel should be avoided if floor slab construction occurs during the wet winter months and the layer cannot be effectively drained. We recommend floor designers and contractors refer to the current American Concrete Institute (ACI) Manual of Concrete Practice for further information regarding vapor barrier installation below slab-on-grade floors.

4.6 Infiltration Feasibility

Based on our study, it is our opinion that subsurface conditions observed in the test pits are not favorable for stormwater infiltration. This is due primarily to the relatively high fines content and dense and/or cemented nature of the till-like soils.

4.7 Stormwater Facilities

Current information indicates a stormwater detention vault is planned for the project. As an option, we are also providing geotechnical recommendations for stormwater pond design and construction.

Detention Vault

Vault foundations supported by the very dense till soils may be designed for an allowable bearing capacity of 5,000 pounds per square foot (psf). For short-term loads, such as seismic, a one-third increase in this allowable capacity can be used. Friction at the base of the vault foundations and passive earth pressures will provide resistance to the lateral loads. These values are provided in Section 4.4.

The magnitude of earth pressures developing on the vault walls will depend in part on the quality and compaction of the wall backfill. To prevent development of hydrostatic pressure and uplift on the vault, wall drainage must be installed. Vault wall drainage should consist of a minimum 4-inch diameter perforated PVC pipe placed around the perimeter of the vault at an elevation no higher than its dead storage elevation. The drain pipe should be enveloped in drainage aggregate that extends as a 12-inch thick layer to the top of the vault. Alternatively, prefabricated drainage panels such as Miradrain G100N can be substituted for the 12-inch gravel drainage layer. The panels should extend at least six inches into the drainage aggregate surrounding the perforated drain pipe.

With the recommended wall backfill and drainage, we recommend designing the vault walls for an earth pressure imposed by an equivalent fluid weighing 50 pcf. Any portion of the wall for which drainage cannot be provided should be designed for an earth pressure equivalent to a fluid weighing 85 pcf. For evaluating walls under seismic loading, an additional uniform earth pressure equivalent to 8H psf, where H is the height of the below-grade wall in feet, can be used. These values assume a horizontal backfill condition. Where applicable, a uniform horizontal traffic surcharge value of 75 psf should be included in design of vault walls.

Detention Pond

Based on the results of our test pit explorations, we expect that very dense till soils would be exposed at stormwater detention pond bottom elevations. If fill berms will be constructed, the berm locations should be stripped of topsoil, duff, and soils containing organic material prior to the placement of fill. The fill berms should be constructed by placing structural fill in layers no more than 12 inches thick and compacting the lifts to a minimum of 95 percent of the soil's maximum dry density, as determined by American Society for Testing and Materials (ASTM) Test Designation D-1557 (Modified Proctor). Material used to construct pond berms should consist of predominately granular soils with a maximum size of 3 inches and a minimum of 20 percent fines. The results of laboratory testing indicate that till soils would meet this gradational requirement. Terra Associates, Inc. should examine and test on-site soils, or imported materials proposed for use as berm fill prior to their use.

Because of exposure to fluctuating stored water levels, soils exposed on the interior side slopes of the ponds may be subject to some risk of periodic shallow instability or sloughing. Establishing interior slopes at a 3:1 gradient will significantly reduce or eliminate this potential. Exterior berm slopes and interior slopes above the maximum water surface should be graded to a finished inclination no steeper than 2:1. Finished slope faces should be thoroughly compacted and vegetated to guard against erosion.

4.8 Utilities

Utility pipes should be bedded and backfilled in accordance with American Public Works Association (APWA) or City of Monroe requirements. At minimum, trench backfill should be placed and compacted as structural fill as described in Section 4.2 of this report. Soils excavated on-site should generally be suitable for use as backfill material. However, the vast majority of the upper site soils are fine grained and moisture sensitive; therefore, moisture conditioning may be necessary to facilitate proper compaction. If utility construction takes place during the winter, it may be necessary to import suitable wet weather fill for utility trench backfilling.

4.9 Pavements

Pavement subgrade should be prepared as described in the Section 4.2 of this report. Regardless of the degree of relative compaction achieved, the subgrade must be firm and relatively unyielding before paving. The subgrade should be proofrolled with heavy rubber-tire construction equipment such as a loaded 10-yard dump truck to verify this condition.

The pavement design section is dependent upon the supporting capability of the subgrade soils and the traffic conditions to which it will be subjected. For residential access, with traffic consisting mainly of light passenger vehicles with only occasional heavy traffic, and with a stable subgrade prepared as recommended, we recommend the following options for pavement sections:

- Two inches of hot mix asphalt (HMA) over four inches of crushed rock base (CRB)
- Full depth HMA – 3 ½ inches

The paving materials used should conform to the Washington State Department of Transportation (WSDOT) specifications for ½-inch class HMA and CRB.

Long-term pavement performance will depend on surface drainage. A poorly-drained pavement section will be subject to premature failure as a result of surface water infiltrating into the subgrade soils and reducing their supporting capability. For optimum pavement performance, we recommend surface drainage gradients of at least two percent. Some degree of longitudinal and transverse cracking of the pavement surface should be expected over time. Regular maintenance should be planned to seal cracks when they occur.

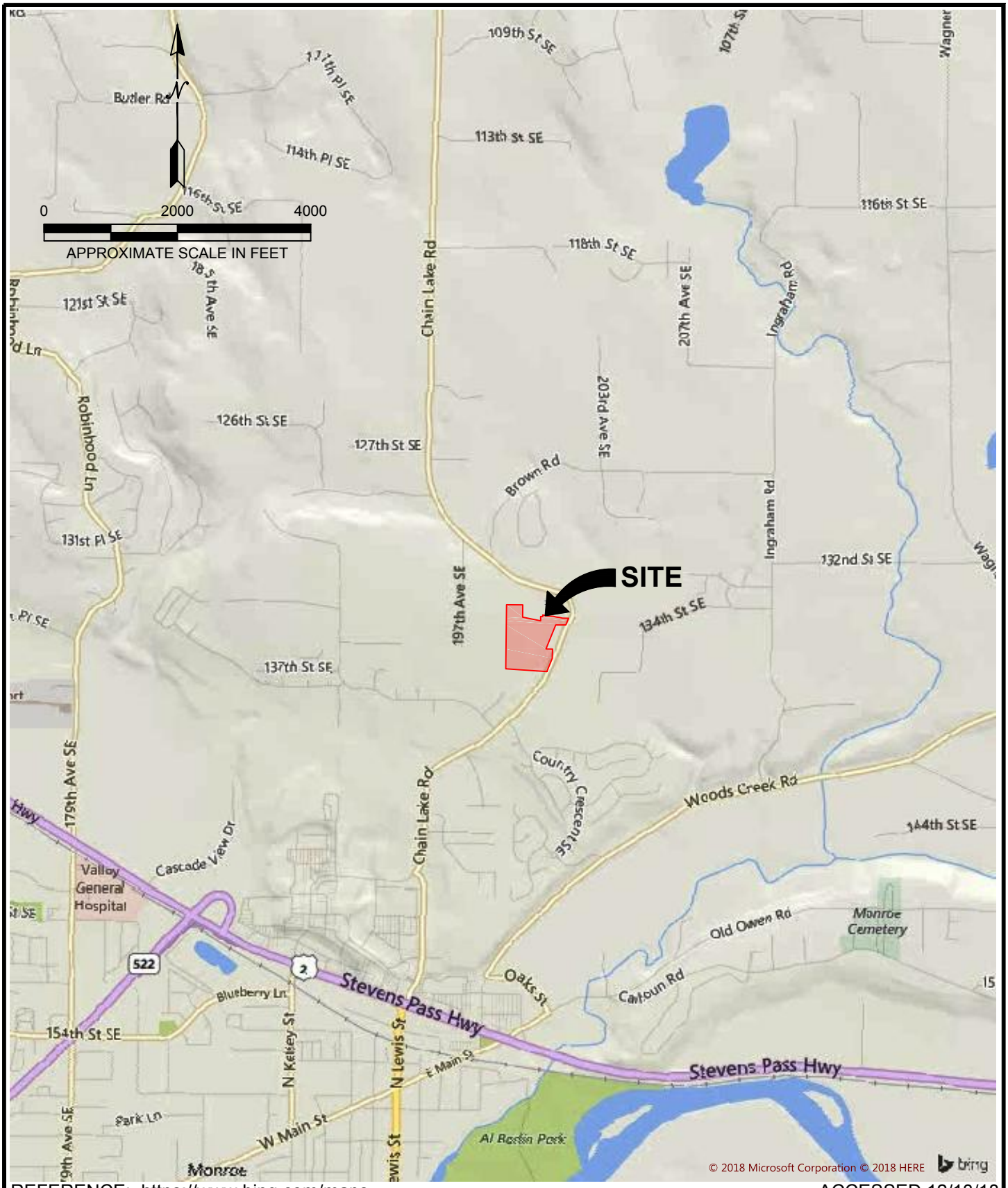
5.0 ADDITIONAL SERVICES

Terra Associates, Inc. should review the final designs and specifications in order to verify that earthwork and foundation recommendations have been properly interpreted and implemented in project design. We should also provide geotechnical services during construction in order to observe compliance with our design concepts, specifications, and recommendations. This will allow for design changes if subsurface conditions differ from those anticipated prior to the start of construction.

6.0 LIMITATIONS

We prepared this report in accordance with generally accepted geotechnical engineering practices. This report is the copyrighted property of Terra Associates, Inc. and is intended for specific application to the Garibaldi Property project in Monroe, Washington. This report is for the exclusive use of Garibaldi Lake, LLC and their authorized representatives. No other warranty, expressed or implied, is made.

The analyses and recommendations presented in this report are based on data obtained from our on-site test pits. Variations in soil conditions can occur, the nature and extent of which may not become evident until construction. If variations appear evident, Terra Associates, Inc. should be requested to reevaluate the recommendations in this report prior to proceeding with construction.



REFERENCE: https://www.bing.com/maps ACCESSED 12/13/18

Terra Associates, Inc.
Consultants in Geotechnical Engineering
Geology and
Environmental Earth Sciences

VICINITY MAP
GARIBALDI PROPERTY
MONROE, WASHINGTON

Proj.No. T-8079	Date: DEC 2018	Figure 1



NOTE:

THIS SITE PLAN IS SCHEMATIC. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE. IT IS INTENDED FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR DESIGN OR CONSTRUCTION PURPOSES.

REFERENCE: SITE PLAN PROVIDED BY CPH CONSULTANTS.

LEGEND:

APPROXIMATE TEST PIT LOCATION

0 120 240

APPROXIMATE SCALE IN FEET

Terra Associates, Inc.
Consultants in Geotechnical Engineering
Geology and
Environmental Earth Sciences

EXPLORATION LOCATION PLAN
GARIBALDI PROPERTY
MONROE, WASHINGTON

Proj.No. T-8079	Date: DEC 2018	Figure 2

APPENDIX A
FIELD EXPLORATION AND LABORATORY TESTING

Garibaldi Property
Monroe, Washington

On November 29, 2018, we investigated subsurface conditions at the site by excavating 10 test pits to a maximum depth of 10 feet below existing surface grades using a Takeuchi TB145 mini-excavator. The test pit locations are shown on Figure 2. The test pit locations were approximately determined in the field by sighting and pacing from existing surface features. The Test Pit Logs are presented on Figures A-2 through A-11.

A geologist from our office maintained a log of each test pit as it was excavated, classified the soil conditions encountered, and obtained representative soil samples. All soil samples were visually classified in the field in accordance with the Unified Soil Classification System. A copy of this classification is presented as Figure A-1.

Representative soil samples obtained from the test pits were placed in sealed plastic bags and taken to our laboratory for further examination and testing. The moisture content of each sample was measured and is reported on the Test Pit Logs. Grain size analyses were performed on six of the soil samples. The results are shown on Figures A-12 and A-13.

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTION
COARSE GRAINED SOILS More than 50% material larger than No. 200 sieve size	**GRAVELS** More than 50% of coarse fraction is larger than No. 4 sieve	Clean Gravels (less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.
		Gravels with fines	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS More than 50% of coarse fraction is smaller than No. 4 sieve	Clean Sands (less than 5% fines)	SW	Well-graded sands, sands with gravel, little or no fines.
			SP	Poorly-graded sands, sands with gravel, little or no fines.
		Sands with fines	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS More than 50% material smaller than No. 200 sieve size	**SILTS AND CLAYS** Liquid Limit is less than 50%		ML	Inorganic silts, rock flour, clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity. (Lean clay)
			OL	Organic silts and organic clays of low plasticity.
	SILTS AND CLAYS Liquid Limit is greater than 50%		MH	Inorganic silts, elastic.
			CH	Inorganic clays of high plasticity. (Fat clay)
			OH	Organic clays of high plasticity.
HIGHLY ORGANIC SOILS			PT	Peat.

DEFINITION OF TERMS AND SYMBOLS

COHESIONLESS

Density	Standard Penetration Resistance in Blows/Foot
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	>50

COHESIVE

Consistancy	Standard Penetration Resistance in Blows/Foot
Very Soft	0-2
Soft	2-4
Medium Stiff	4-8
Stiff	8-16
Very Stiff	16-32
Hard	>32

I	2" OUTSIDE DIAMETER SPILT SPOON SAMPLER
II	2.4" INSIDE DIAMETER RING SAMPLER OR SHELBY TUBE SAMPLER
▼	WATER LEVEL (Date)
Tr	TORVANE READINGS, tsf
Pp	PENETROMETER READING, tsf
DD	DRY DENSITY, pounds per cubic foot
LL	LIQUID LIMIT, percent
PI	PLASTIC INDEX
N	STANDARD PENETRATION, blows per foot

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UNIFIED SOIL CLASSIFICATION SYSTEM
GARIBALDI PROPERTY
MONROE, WASHINGTON

Proj.No. T-8079	Date: DEC 2018	Figure A-1

LOG OF TEST PIT NO. TP-1

FIGURE A-2

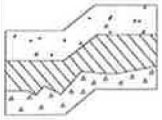
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 365 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2.5 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(5 inches SOD) Brown silty fine SAND/SILT, few gravels, moist to wet. (SM/ML) (Weathered till)	Medium Dense	45.9
2				
▼				
3		Gray-brown silty SAND, some gravel, few cobbles, fine to medium sand, moderately cemented, moist. (SM) (Till)		
4				
5				
6			Very Dense	12.7
7				
8				
9		Test pit terminated at approximately 9 feet. Moderate perched groundwater seepage at 2.5 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-2

FIGURE A-3

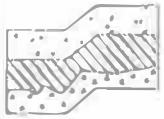
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** K R

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 349 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 3 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
		(7 inches TOPSOIL) Brown silty fine SAND/SILT, few gravels, moist to wet. (SM/ML) (Weathered till)	Medium Dense	
2		*2 feet: 2-foot boulder.		23.7
▼ 3		Gray-brown silty SAND, some gravel, few cobbles, trace boulders, fine to medium sand, moderately cemented, moist. (SM) (Till)		
5				14.0
6			Very Dense	
9		Test pit terminated at approximately 9 feet. Moderate perched groundwater seepage at 3 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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Environmental Earth Sciences

LOG OF TEST PIT NO. TP-3

FIGURE A-4

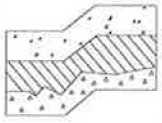
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 309 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(6 inches TOPSOIL) Light brown mottled silty fine SAND, few gravels, moist to wet. (SM) (Weathered till)	Medium Dense	16.6
▼ 2				
3		Gray-brown silty SAND, some gravel and cobbles, fine to medium sand, wet. (SM) (Till)	Dense	
4				
5				
6		*6 feet: Moist, moderately cemented, very dense.	Very Dense	10.3
7				
8				
9		Test pit terminated at approximately 9 feet. Moderate perched groundwater seepage at 2 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-4

FIGURE A-5

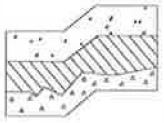
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 312 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(8 inches TOPSOIL) Light brown mottled silty fine SAND/SILT, few gravels, moist to wet. (SM/ML) (Weathered till)	Medium Dense	
▼ 2				32.2
3		Gray-brown silty SAND, some gravel, few cobbles, trace boulders, fine to medium sand, weakly cemented, moist to wet. (SM) (Till)		
4				
5				
6			Dense	
7				
8				10.7
9		Test pit terminated at approximately 9 feet. Light perched groundwater seepage at 2 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-5

FIGURE A-6

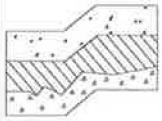
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Brush **APPROX. ELEV:** 326 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 4 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
		(6 inches TOPSOIL) Brown silty SAND, few gravels, fine sand, moist. (SM) (Weathered till)	Medium Dense	
3				38.4
		Brown-gray silty SAND, some gravel, few cobbles, fine to medium sand, strongly cemented, moist to wet. (SM) (Till) *5 feet: Very difficult digging.	Very Dense	
7				9.6
9		Test pit terminated at 9 feet due to excavator refusal. Light perched groundwater seepage at 4 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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Consultants in Geotechnical Engineering Geology and Environmental Earth Sciences

LOG OF TEST PIT NO. TP-6

FIGURE A-7

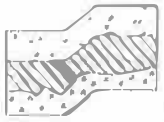
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Brush **APPROX. ELEV:** 322 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2.5 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(6 inches TOPSOIL) Brown silty SAND, few gravels, fine sand, moist. (SM) (Weathered till)	Medium Dense	
2				
2.5 ▼		*2.5 feet: Wet		35.8
3				
4		Brown-gray silty SAND, some gravel and cobbles, fine to medium sand, wet. (SM) (Till)		
5		*5 feet: Very difficult digging.		
6				
7			Very Dense	
8				
9				11.7
10		Test pit terminated at approximately 10 feet. Moderate perched groundwater seepage at 2.5 feet. No caving.		
11				
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-7

FIGURE A- 8

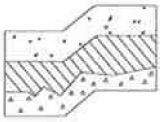
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Brush **APPROX. ELEV:** 318 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 3 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(8 inches TOPSOIL/DUFF) Brown silty SAND, some gravel, fine sand, moist. (SM) (Weathered till) *1- foot:Breached an abandoned 4-inch PVC drainline.	Medium Dense	20.8
2				
▼ 3		Gray-brown mottled silty SAND, some gravel and cobbles, trace boulders, fine to medium sand, moist to wet. (SM) (Till)	Very Dense	9.8
4				
5				
6				
7				
8				
9		Test pit terminated at approximately 8.5 feet. Light perched groundwater seepage at 3 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



Terra Associates, Inc.
Consultants in Geotechnical Engineering Geology and Environmental Earth Sciences

LOG OF TEST PIT NO. TP-8

FIGURE A-9

PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 338 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2.5 Feet **DEPTH TO CAVING:** N/ A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(5 inches SOD) Brown silty SAND, some gravel, fine sand, moist. (SM) (Weathered till) *1-foot: 18-inch boulder.	Medium Dense	29.9
3		Gray-brown mottled silty SAND, some gravel and cobbles, trace boulders, fine to medium sand, moist. (SM) (Till)	Very Dense	13.1
10		Test pit terminated at approximately 9.5 feet. Heavy perched groundwater seepage at 2.5 feet. No caving.		
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-9

FIGURE A-10

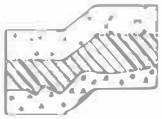
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 348 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2.5 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(4 inches TOPSOIL) Brown silty SAND, few gravels, fine sand, moist. (SM) (Weathered till)	Loose	52.2
2		Gray-brown mottled silty SAND, some gravel, few cobbles, trace boulders, fine to medium sand, moderately cemented, moist. (SM) (Till)	Very Dense	14.0
3				
4				
5				
6				
7				
8				
9		Test pit terminated at approximately 9 feet. Light perched groundwater seepage at 1.5 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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Environmental Earth Sciences

LOG OF TEST PIT NO. TP-10

FIGURE A-11

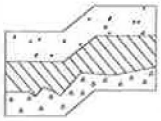
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Brush **APPROX. ELEV:** 303 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** N / A **DEPTH TO CAVING:** N/A

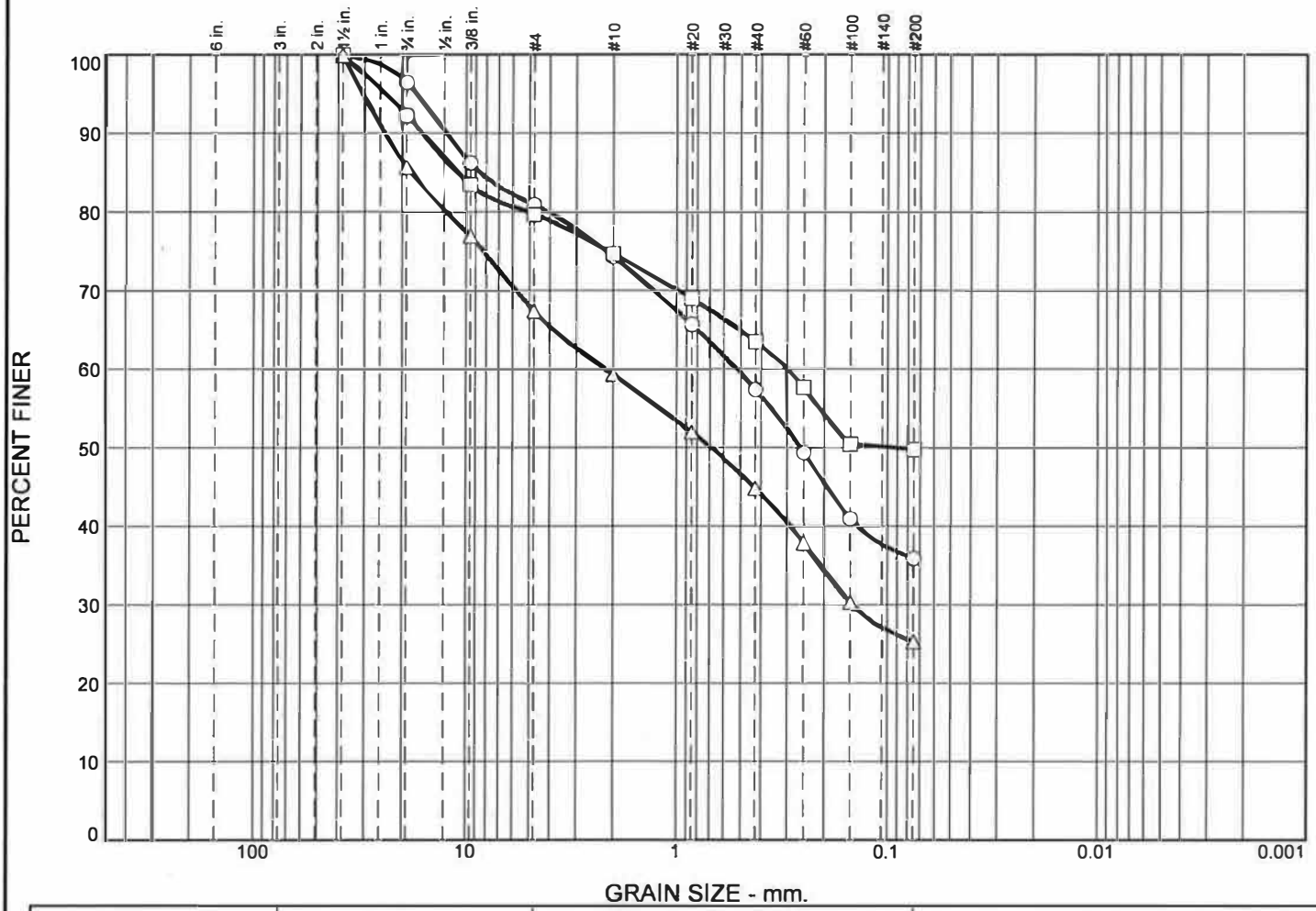
Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(10 inches TOPSOIL) Brown SILT with fine sand, few gravels, moist. (ML) (Weathered till)	Medium Dense	38.7
3		Brown-gray mottled silty SAND, some gravel, few cobbles, fine to medium sand, moderately cemented, moist. (SM) (Till)	Very Dense	8.7
9		Test pit terminated at approximately 9 feet. No groundwater. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



Terra Associates, Inc.
Consultants in Geotechnical Engineering Geology and Environmental Earth Sciences

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	3.5	15.5	6.7	16.9	21.5	35.9	
□	0.0	7.7	12.6	5.0	11.2	13.7	49.8	
△	0.0	14.3	18.3	8.0	14.5	19.6	25.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			8.5605	0.5198	0.2590					
□			10.9888	0.2990	0.0914					
△			18.2182	2.1557	0.6888	0.1462				

Material Description	USCS	AASHTO
○ Silty SAND	SM	
□ Silty SAND	SM	
△ Silty SAND	SM	

Project No. T-8079 **Client:** Garibaldi Lake, LLC

Project: Garibaldi Property

○ **Location:** TP-1 **Depth:** -6 feet

□ **Location:** TP-3 **Depth:** -2 feet

△ **Location:** TP-5 **Depth:** -7 feet

Remarks:

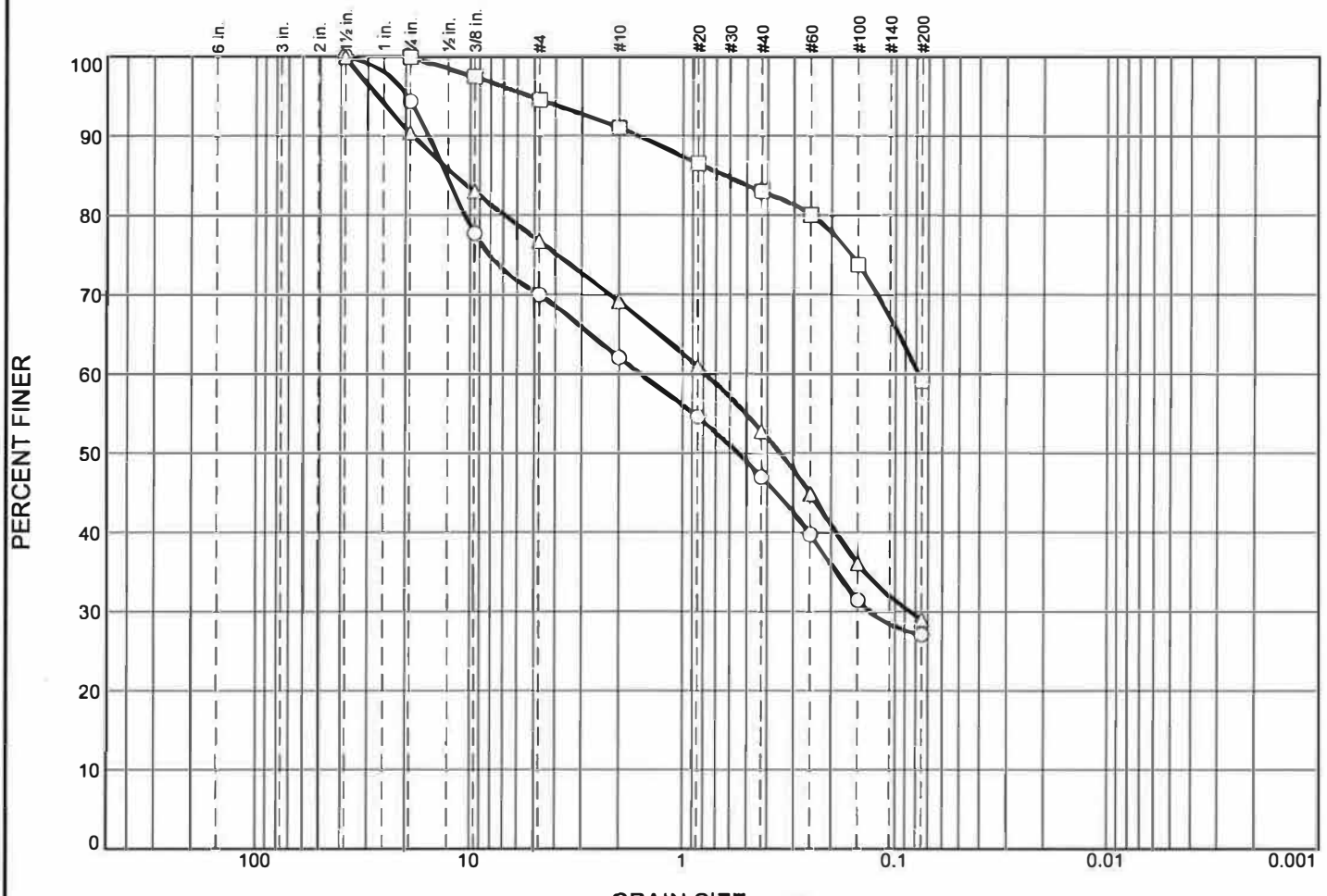
Terra Associates, Inc.

Kirkland, WA

Figure A-12

Tested By: FQ

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	5.6	24.4	7.9	15.1	19.9	27.1	
□	0.0	0.0	5.4	3.6	7.9	24.0	59.1	
△	0.0	9.6	13.7	7.6	16.3	23.8	29.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			12.8907	1.5730	0.5495	0.1308				
□			0.6343	0.0779						
△			11.6942	0.7809	0.3464	0.0849				

Material Description	USCS	AASHTO
○ Silty SAND	SM	
□ SILT	ML	
△ Silty SAND	SM	

Project No. T-8079 **Client:** Garibaldi Lake, LLC

Project: Garibaldi Property

○ **Location:** TP-7 **Depth:** -6 feet

□ **Location:** TP-10 **Depth:** -2.5 feet

△ **Location:** TP-10 **Depth:** -8 feet

Remarks:

Terra Associates, Inc.

Kirkland, WA

Figure A-13

Tested By: FQ

EXHIBIT 15-B

RECEIVED
09/22/2021
CITY OF MONROE

MEMORANDUM

TERRA ASSOCIATES, Inc.
Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

To:	**Melanie Davies**	Date:	**9-16-21**
	Garibaldi Lake, LLC	Project No.:	**T-8079**
From:	**Ted Schepper, P.E.**	Project Name:	**Garibaldi PRD**
Subject:	**Response to Comment – Added Property**		**Monroe, Washington**
Ref:	**Terra Associates, Inc., Geotechnical Report, Garibaldi Property, dated December 14, 2018**		

Melanie:

Since issuance of the referenced report, the Garibaldi project has expanded in size by adding two adjacent south tax parcels totaling about 4.3 acres of land. In their review of the project and our referenced report, the city has requested we review this added property and issue a letter/memo addressing whether or not our current report adequately characterizes soil conditions on the property and recommendation contained in the report are applicable to the expanded project area.

Soil conditions indicated by the test pit explorations completed for the referenced report consist of weathered and unweathered glacial till. Review of the area geologic map indicates the till deposits are widespread and extend well beyond the limits of the added southern parcels. A representative of Terra Associates completed a geologic reconnaissance of the added property on September 1, 2021. We did not observe any surface features on the property that would suggest or indicate the underlying subsurface geology on the added property would differ from that identified by test pit explorations completed for the referenced report.

Based on our review we conclude site exploration completed for the referenced report adequately characterizes soils conditions that can be expected on the added southern parcels and geotechnical engineering recommendations provided in the report are valid for the added property.

If you have any questions or require additional information, please call.



cc: Casey Torres, P.E., CPH Consultants

EXHIBIT 16

RECEIVED 9/21/2021

C|P|H CONSULTANTS

Preliminary Storm Drainage Report

Garibaldi PRD
CPH Project No. 0054-18-028

Monroe, WA

Prepared for:

Garibaldi Lake, LLC
Melanie Davies
1010 Market Street
Kirkland, WA 98033

Prepared by:

CPH Consultants
Matt Hough, PE
Casey Torres, PE
11321-B NE 120th Street
Kirkland, WA 98034

September 17, 2021

C|P|H
CONSULTANTS

Preliminary Storm Drainage Report

Garibaldi PRD
CPH Project No. 0054-18-028

Monroe, WA



Prepared for:

Garibaldi Lake, LLC
Melanie Davies
1010 Market Street
Kirkland, WA 98033

Prepared by:

CPH Consultants
Matt Hough, PE
Casey Torres, PE
11321-B NE 120th Street
Kirkland, WA 98034

September 17, 2021

CP|H
CONSULTANTS

PRELIMINARY STORM DRAINAGE REPORT

FOR

GARIBALDI PRD

MONROE, WA

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SECTION 3 – OFF-SITE ANALYSIS.....4

OFFSITE ANALYSIS

UPSTREAM ANALYSIS

DOWNSTREAM ANALYSIS

SECTION 4 – PERMANENT STORMWATER CONTROL PLAN.....6

PERFORMANCE STANDARDS AND GOALS

PRE-DEVELOPED SITE HYDROLOGY

ON-SITE STORMWATER MANAGEMENT

DEVELOPED SITE HYDROLOGY

CONVEYANCE SYSTEM ANALYSIS AND DESIGN

WATER QUALITY TREATMENT

SECTION 5 – CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN.....13

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FIGURE 2 – EXISTING SITE CONDITIONS

FIGURE 3 – DEVELOPED SITE CONDITIONS

FIGURE 4 – PREDEVELOPED DRAINAGE BASINS

FIGURE 5 – DEVELOPED DRAINAGE BASINS

APPENDICES

APPENDIX A – NRCS SOILS DATA AND GEOTECHNICAL REPORT

APPENDIX B – WWHM INPUT PARAMETERS AND RESULTS

APPENDIX C – CONVEYANCE CALCULATIONS

APPENDIX D – DOWNSTREAM ANALYSIS

APPENDIX E – OPERATIONS AND MAINTENANCE MANUAL

SECTION 1 – PROJECT OVERVIEW

This Preliminary Storm Drainage Report (SDR) describes the engineering analysis of the surface water conditions, proposed development improvements, and required storm drainage facilities for the *Garibaldi PRD* project located in Monroe, Washington. The report summarizes the design criteria for the storm drainage collection systems, associated flow control (i.e. detention) and water quality facilities, and temporary construction Best Management Practices (BMPs) proposed for the project. Figure 1 (Vicinity Map) illustrates the general location of the project site. Figures 2 and 3 of this report (see *Figures* section) illustrate the existing and proposed developed conditions of the project area, respectively.

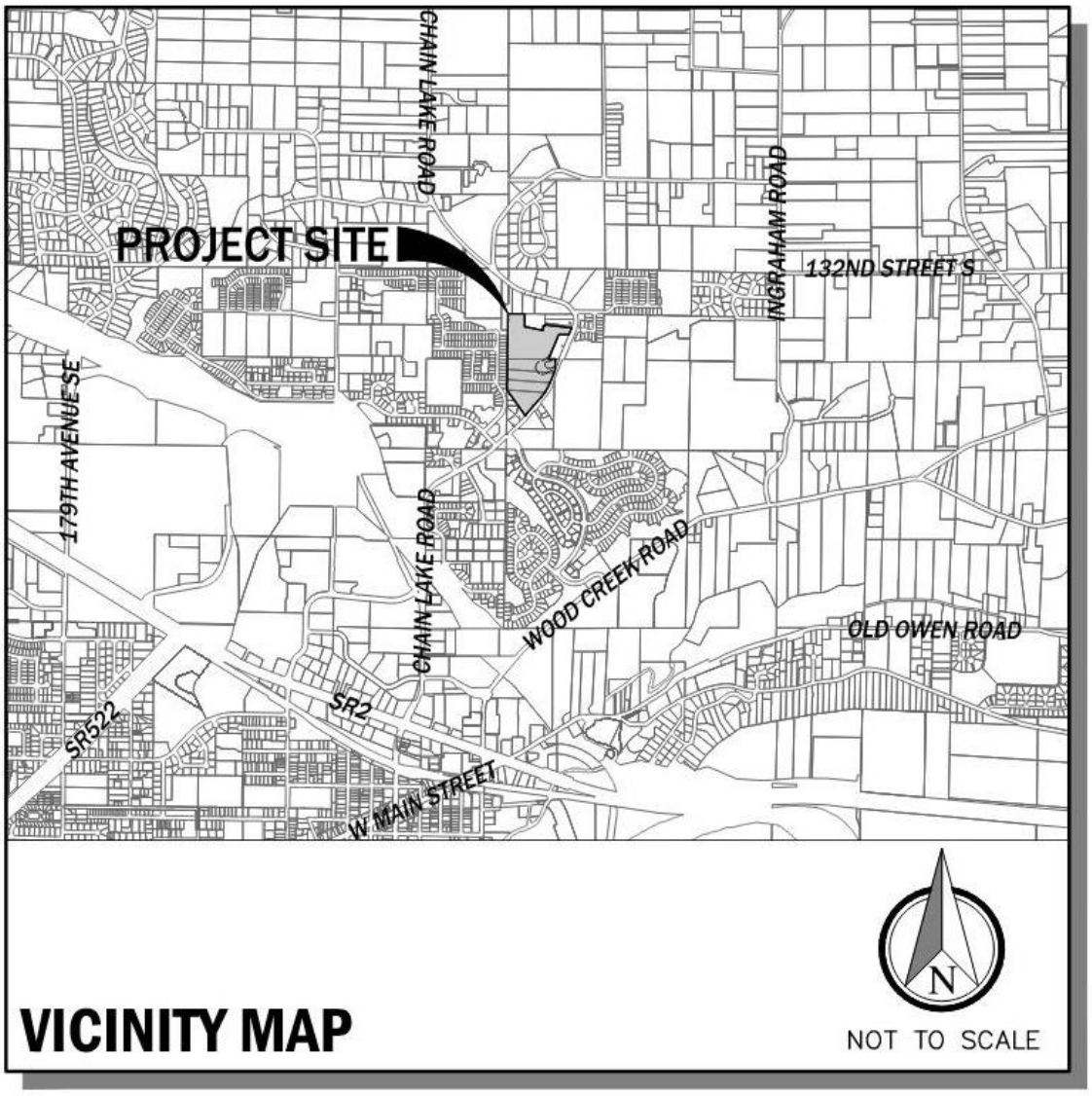


Figure 1 - Vicinity Map

The *Garibaldi PRD* project proposes to develop 90 new single-family residential lots, per the requirements of R-4 zoning, through the City of Monroe's planned residential development process (PRD). The development will include associated roadway, storm drainage, sewer, and water infrastructure improvements to serve these proposed lots. Park and recreational open space will be provided on-site per PRD guidelines. Frontage improvements to Chain Lake Road will be provided, including pavement widening, curb and gutter, planter and sidewalk improvements adjacent to the property. The project site consists of a 17.85-acre assemblage of five developed parcels containing single-family residences and their associated structures within the Monroe city limits. Existing access to Garibaldi PRD is provided via Chain Lake Road along the eastern boundary of the site. The site is more generally located in portions of the NE ¼ and SE ¼ of the NW ¼ of Section 31, township 28 North, Range 7 East, W.M., Snohomish County, Washington.

The site generally descends from the northwestern property corner to the southeast with a total relief of approximately 110 feet. There is a ridgeline in the central portion of the site that creates two onsite drainage basins that do not converge within a ¼ mile downstream. The northern basin area is approximately 9.78 acres and conveys runoff over pastured and partially forested area and sheet flows to an existing ditch on the west side of Chain Lake Road. The southern basin is approximately 7.06 acres and conveys runoff over forested and partially pastured slope and sheet flows to an existing ditch along the west frontage of Chain Lake Road near the southeast corner of the subject property. The north basin ditch conveys runoff toward a culvert inlet that discharges southeast to a shallow, vegetated channel at the east side of Chain Lake road and flows southeasterly to a shallow, vegetated channel at the east side of Chain Lake Road and flows southeasterly through vegetated wetland areas. The south basin ditch conveys runoff southwesterly to a culvert unlet that discharges into a catch basin and continues in existing underground drainage infrastructure. A downstream analysis has been completed as part of this report in Section 3 to confirm downstream capacity for developed site runoff.

SECTION 2 – EXISTING CONDITIONS SUMMARY

The Garibaldi PRD project site is comprised of five adjoining parcels (Tax Parcel #'s 28073100202900, 28073100202800, 28073100201600, 28073100200800, and 28073100203900) with a total area of approximately 17.85 acres. It is located within the Woods Creek Drainage Basin, part of the Snohomish Watershed, WRIA 07. The site is bordered by single-family residences on all sides with access from Chain Lake Road to the east. The Eaglemont neighborhood borders the site to the west. Four of the parcels contain single-family residences and their associated structures. Each parcel varies in size and existing conditions. The first parcel is approximately 2.1 acres and consists of a single-family home, barn garage, and other outlying structures within a fenced perimeter. The second parcel is approximately 2.0 acres and consists of a single-family residence, detached garage, and other outlying structures with a fenced perimeter on its southern boundary. The third parcel is approximately 2.2 acres and consists of mostly undeveloped land in forested condition with a single-family home and outlying structures occupying the northwest corner of the parcel. The fourth parcel is approximately 2.7 acres and consists of vacant undeveloped land in forested conditions and a wetland buffer in the eastern half of the parcel. And the fifth parcel is approximately 8.9 acres with a single-family home, stable, barn, and other outlying structures within a fenced perimeter consisting of pasture conditions and has large, fenced pasture area adjacent to the frontage road.

The general soil classification of the developable portion of the site is characterized by the Natural Resources Conservation Service (NRCS) as Tokul gravelly medial loam, with 0 to 8 and 8 to 15 percent slopes. A preliminary geotechnical report has been completed and is provided in Appendix A, along with a copy of the NRCS Web Soil Survey data.

The site generally descends from the northwestern property corner to the southeast with a total relief of 110 feet. There is a ridgeline dividing the property into two separate basins. Approximately 7.06 acres of forested and pastured slope is located in the south basin. Surface runoff primarily sheet flows across the forested and pastured areas toward an existing ditch on the west side of Chain Lake Road near the southeast corner of the site. This ditch discharges to a shallow, vegetated channel at the western frontage of the existing road and flows easterly toward an existing culvert that conveys runoff across Chain Lake Road and continues in a shallow vegetated channel. Approximately 9.78 acres of forested and pastured slope is located in the north basin. The north basin runoff flows southeasterly and is eventually collected in a ditch along Chain lake Road north of the ridgeline. Flows are then conveyed to a culvert inlet that discharges to a shallow, vegetated channel at the east side of Chain Lake Road and flows southeasterly through vegetated wetland areas.

There is one stream located within one Category III wetland near the eastern property boundary in the central portion of the site. See Figure 2 for a map of existing site conditions. A downstream analysis has been completed as part of this report in Section 3 to confirm downstream capacity for developed site runoff.

SECTION 3 – OFF-SITE ANALYSIS

This section summarizes the analysis of the onsite and offsite drainage conditions for the project. The methodology of the analysis and reporting of these conditions is in general accordance with the Department of Ecology's 2012 Stormwater Management Manual for Western Washington (SWMM). This analysis includes research of available information, a site visit, an upstream analysis, and a downstream analysis. Research sources include aerial photography, GIS information, Snohomish County Planning and Development Services (PDS) Map Portal, survey data, and as-built plans for the adjacent Eaglemont neighborhood provided by the City of Monroe. The City of Monroe's Public Works Department was contacted to inquire about any recent and/or relevant drainage complaints in the project vicinity. Minor drainage complaints were made by property owners along the north and south basin downstream paths. According to the City, these complaints are regarding sheet flow runoff entering adjacent properties. As a result of the sheet flow runoff, ponding within the ditch has been the reason for these complaints. It is understood that these complaints have been addressed by the City and/or others. The City responded and noted no significant complaints from the property owners along either quarter-mile downstream paths from the project site.

Site Visit

A site visit was completed on November 1, 2018 at 2:30 PM to observe drainage conditions in the project vicinity and to inspect the downstream conveyance system and assess its capacity for mitigated site discharge. The weather was approximately 55° and cloudy with intermittent showers. There was 0.73" of precipitation measured that day and 2.47" total precipitation over the prior week. The result of this was that the ground was fully saturated and all conveyance facilities in the area were carrying significant flows, ideal conditions to inspect a drainage system.

Upstream Analysis

Based on the topography examined in the Snohomish County Planning and Development Services Map Portal (SCPDSMP), runoff flows onto and through the site from adjacent properties north and west of the site. Aerial imagery from SCPDSMP shows that the properties to the north and west are developed with private drainage infrastructure improvements. The properties to the west are part of the Eaglemont subdivision and are recently developed single family subdivision lots. The properties to the north are large residential parcels consisting of homes, associated structures, and large pasture areas with driveway slopes towards the existing ditch along the west side of Chain Lake Road. Based on a site visit, it was visually apparent that any runoff that flows onto and through the site is minimal. It appears that existing landscaped topography and private drainage infrastructure almost entirely reroutes runoff southerly and westerly to the Eaglemont subdivision and northerly and easterly toward the ditch along Chain Lake Road prior to entering the project site.

The existing ditch on the west side of Chain Lake Road collects upstream runoff and conveys it along the project frontage to the same point of convergence as the site's North Basin. The ditch carried visible flow during the site visit and was well below its full capacity. Proposed grading and improvements will reroute any runoff along the north property boundary to the ditch along Chain Lake Road.

Downstream Analysis

Site runoff sheet flows into the existing ditch on the west side of Chain Lake Road. The site is divided by a ridgeline into north and south drainage basins that do not converge within a quarter (0.25) mile downstream. See Appendix D for the Offsite Analysis Table (OAT), downstream analysis map, and photos. Refer to the map for locations of the numbered photos and structure symbols as listed in the OAT.

The north basin runoff is collected in an existing ditch on the west side of Chain Lake Road and conveys runoff to a 12" culvert inlet that directs flows easterly under the road and daylights into an open channel ditch on the east side of Chain Lake Road. The downstream path could not be followed further due to private property restrictions and dense vegetation. However, from aerial photos and the topography of the area it is believed that the runoff continues southeast as open channel flow and stream-like conveyance beyond the quarter (0.25) mile downstream threshold where a series of wetland areas and culverts convey surface water to the Skykomish river as part of the Snohomish river watershed. See Appendix D for photos and a summary table of the downstream system.

The south basin is collected in an existing ditch near the southeast corner of the site along Chain Lake Road. The ditch conveys runoff approximately 532 feet southwesterly to a 12" concrete culvert that directs flow under a private driveway. A series of 12" storm drainage pipes collects and conveys runoff along the below grade storm drainage system on the west side of Chain Lake Road to the quarter (0.25) mile downstream threshold. Runoff daylights into open channel ditch at approximate 1,340 feet downstream from the site. The downstream path appears to continue as open channel flow in the existing ditch. From aerial photos and the topography of the area it is believed that the runoff continues southerly as open channel flow and enters the existing underground storm drainage infrastructure for conveyance to the Skykomish river as part of the Snohomish river watershed. See Appendix D for photos and a summary table of the downstream system.

The downstream conveyance system appears to be properly functioning and has more than adequate capacity for its tributary drainage area. Runoff from the *Garibaldi PRD* project will meet flow control standards set forth by the Department of Ecology 2012 Stormwater Management Manual for Western Washington. This will result in mitigated peak flows leaving the site for all major storm events and therefore is not expected to have an adverse impact on the downstream system.

SECTION 4 – Permanent Stormwater Control Plan

Performance Standards, Goals and Facility Proposals

The storm drainage analysis and facilities design for this project are proposed in general accordance with the 2012 Department of Ecology Stormwater Management Manual for Western Washington (SMMWW), as amended in December 2014, and as adopted by current Monroe Municipal Code (MMC), section 15.01.025. The project is classified as New Development and will result in greater than 5,000 square-feet of new impervious surface, therefore all nine Minimum Requirements for stormwater management specified by the manual are applicable.

The hydrologic analysis of the runoff conditions for the project site was performed using the Western Washington Hydrologic Model 2012 (WWHM) software to generate peak design flow rates and volumes. A below-grade detention vault for each drainage basin is proposed to treat and detain runoff. Appendix B contains the WWHM model results for the proposed stormwater controls and water quality facilities proposed for the project. See Figure 3 for a map of the developed stormwater system.

Pre-developed Site Hydrology

Table 4.1 shows the pre-developed land use inputs used in the WWHM model and Table 4.2 summarizes the resulting peak design runoff rates. See Figure 3 for pre-developed drainage basins.

Table 4.1 – Pre-developed Drainage Subbasins

Basin	Land Use Area (ac)				
	Forested	Grass	Pasture	Impervious	Total
South Basin	6.80	0.00	0.00	0.00	6.80
North Basin	9.78	0.00	0.00	0.00	9.78
Upstream	0.00	0.00	9.00	1.89	10.89
Total Area (ac)	**16.84**	**0.00**	**9.00**	**1.89**	**27.73**

Table 4.2 – South Basin Pre-developed Peak Flows (POC 2)

Event	Flow Rate (cfs)
2-yr	0.284
10-yr	0.596
25-yr	0.799
50-yr	0.973
100-yr	1.167

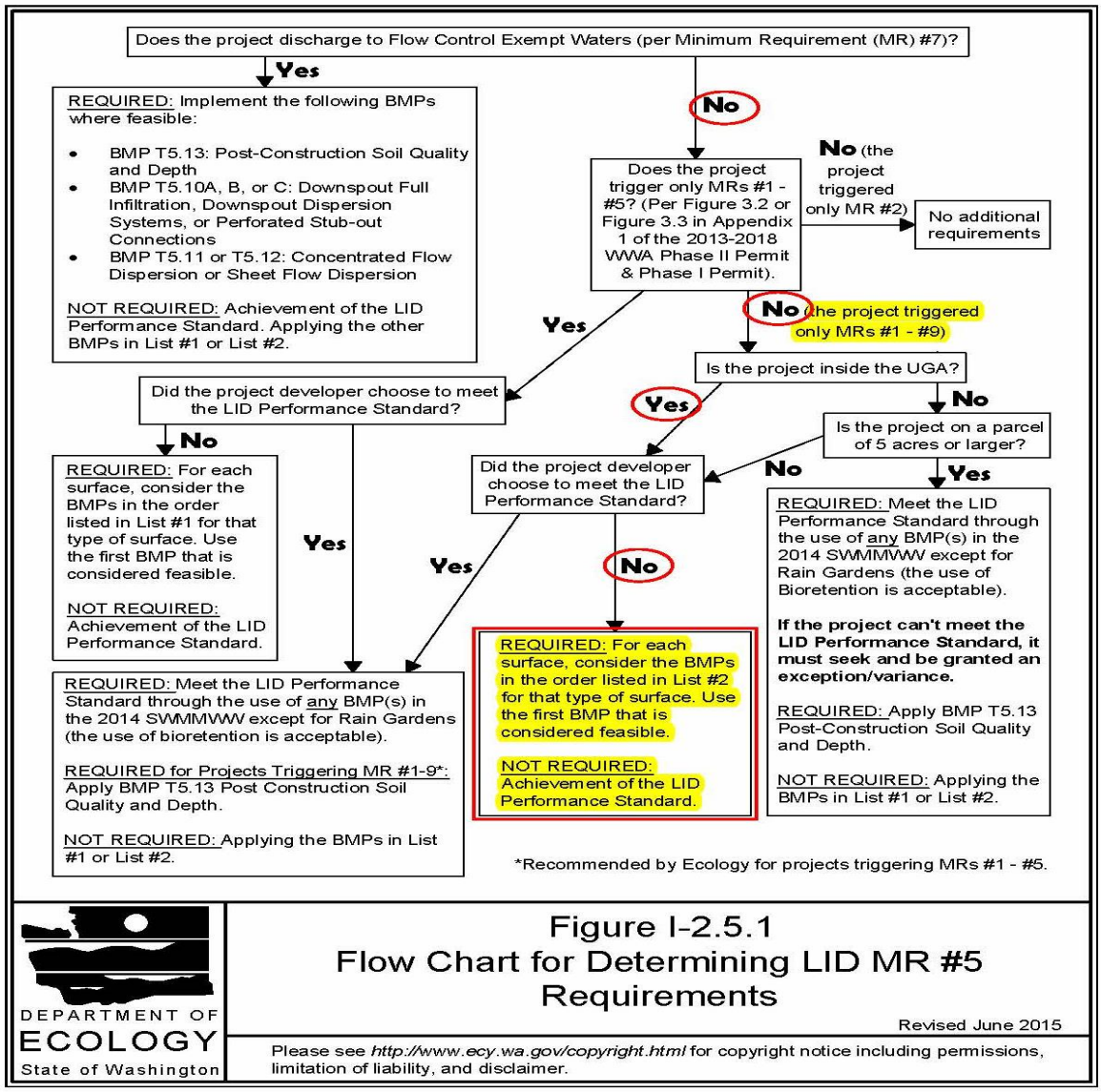
Table 4.3 – North Basin and Upstream Pre-developed Peak Flows (POC 1)

Event	Flow Rate (cfs)
2-yr	1.874
10-yr	3.711
25-yr	4.936
50-yr	5.997
100-yr	7.194

On-Site Stormwater Management

Minimum Requirement #5 addresses the application of on-site stormwater management BMPs with the intent to "infiltrate, disperse, and retain stormwater runoff on-site to the extent feasible without causing flooding or erosion impacts." Requirements for this project are specified on Table I-2.5.1 and Figure I-2.5.1. These are included here with the relevant text highlighted.

Figure I-2.5.1 Flow Chart for Determining LID MR #5 Requirements



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Table I-2.5.1 On-Site Stormwater Management Requirements for Projects Triggering Minimum Requirements #1 - #9

Project Type and Location	Requirement
New development on any parcel inside the UGA, or new development outside the UGA on a parcel less than 5 acres	Low Impact Development Performance Standard and BMP T5.13: Post-Construction Soil Quality and Depth (p.911); or List #2 (applicant option).
New development outside the UGA on a parcel of 5 acres or larger	Low Impact Development Performance Standard and BMP T5.13: Post-Construction Soil Quality and Depth (p.911).
Redevelopment on any parcel inside the UGA, or redevelopment outside the UGA on a parcel less than 5 acres	Low Impact Development Performance Standard and BMP T5.13: Post-Construction Soil Quality and Depth (p.911); or List #2 (applicant option).
Redevelopment outside the UGA on a parcel of 5 acres or larger	Low Impact Development Performance Standard and BMP T5.13: Post-Construction Soil Quality and Depth (p.911).
Note: This table refers to the Urban Growth Area (UGA) as designated under the Growth Management Act (GMA) (Chapter 36.70A RCW) of the State of Washington. If the Permittee is located in a county that is not subject to planning under the GMA, the city limits shall be used.	

The feasibility of the BMPs in DOE List #2 have been evaluated for the *Garibaldi PRD* project as a new development inside the UGA. BMPs listed were considered in order for each type of surface to determine if their use/application for this project was feasible based on the following criteria:

1. Design criteria, limitations, and infeasibility criteria identified for each BMP in this manual; and
2. Competing Need Criteria listed in Chapter V-5 – On-Site Stormwater Management.

Lawn and landscaped areas:

1. **Post-Construction Soil Quality and Depth in accordance with BMP T5.13**

   This BMP is feasible. All soils in lawn and landscaped areas will meet the design guidelines of BMP T5.13. This will be accomplished through one or more of the following implementation methods identified in the manual:

   a. retention of undisturbed native vegetation and soil, or
   b. amendment of existing site topsoil, or
   c. stockpiling and reuse of existing topsoil, or import of approved topsoil mix.

Roofs:

1. **Dispersion in accordance with BMP T5.10A, BMP T5.10B, BMP T5.11, BMP T5.12, BMP T5.30**

   These BMPs are not feasible. The site plan, which is in accordance with City of Monroe PRD requirements, does not retain the minimum amount of native vegetation required to apply the Full Dispersion BMP. There are also no feasible locations on site where the required vegetated flowpath length can be accommodated. The glacial till soil on site exhibits low permeability and is not a suitable receptor for infiltration or retention facilities.

2. **Vegetated Roofs in accordance with BMP T5.17**

   This BMP is not feasible. The proposed single-family buildings do not support this BMP.

3. **Minimal Excavation Foundations in accordance with BMP T5.19**

   This BMP is not feasible. The proposed site requires heavy equipment for grading that could disturb native soil.

4. **Infiltration and Retention in accordance with BMP T5.10C, BMP T5.14A, BMP T5.14B, BMP T5.15**

   Infiltration and Retention BMPs are not feasible, which include Perforated Stub-out Connections, Rain Gardens, Bioretention, and other infiltration or retention BMPs. The glacial till soil on site exhibits low permeability and is not a suitable receptor for infiltration or retention facilities.

Other Hard Surfaces:

1. **Dispersion in accordance with BMP T5.11, BMP T5.12, BMP T5.18, BMP T5.30**

   These BMPs are not feasible. The site plan, which is in accordance with City of Monroe PRD requirements, does not retain the minimum amount of native vegetation required to apply the Full Dispersion BMP. There are also no feasible locations on site where the required vegetated flowpath length can be accommodated. The glacial till soil on site exhibits low permeability and is not a suitable receptor for infiltration or retention facilities.

2. **Infiltration and Retention in accordance with BMP T5.14A, BMP T5.14B, BMP T5.15**

   Infiltration and Retention BMPs are not feasible, which include Rain Gardens, Bioretention, and other infiltration or retention BMPs. The glacial till soil on site exhibits low permeability and is not a suitable receptor for infiltration or retention facilities.

The National Resources Conservation Service (NRCS) Report is attached in Appendix A and indicates these soils are Tokul gravelly medial loam. These are till soils that are not conducive to infiltration.

Developed Site Hydrology

The Standard Flow Control Requirement, part of Minimum Requirement #7, will be applied and states that, "Stormwater discharges shall match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow."

Developed site conditions within the study area were modeled based on the sub-basin configurations shown in Figure 5 and the land use covers summarized in Table 4.4. The residential lots were modeled based on an expected maximum 60 percent impervious coverage as allowed by Monroe Municipal Code (MNC) Bulk Requirements Chapter 18.10.140. Impervious road and sidewalk surface, both on-site and frontage, was calculated from the proposed footprint shown on the improvement plans. The remaining lot area and open space area was modeled as pasture as allowed per Appendix III-C of the SMMWW since it will adhere to BMP T5.13. Due to the existing ridgeline that divides the site, there are two drainage basins that convey site runoff to two separate detention vaults. The basins for the developed South Basin and developed North Basin are shown and detailed in Figure 5. There are two sub-basins that cannot be conveyed to either vault due to grade restrictions and are modeled in WWHM as bypass.

Table 4.4 shows the developed land use inputs used in the WWHM model. Tables 4.5 and 4.6 summarizes the mitigated peak design flow rates.

Table 4.4- Developed Drainage Sub-basins

Basin	Land Use Area (ac)				
	Forested	Lawn	Pasture	Impervious	Total
Upstream Basin	0.000	0.000	9.000	1.890	10.890
Developed North Basin	0.000	0.000	3.153	5.856	9.009
Bypass (North)	0.000	0.000	0.043	0.101	0.144
Developed South Basin	0.000	0.000	2.217	4.023	6.240
Bypass (South)	0.000	0.000	0.543	0.403	0.946
Total Area	**0.000**	**0.000**	**15.025**	**12.678**	**27.703**

Table 4.5 – South Basin Developed Peak Flows (POC 2)

Event	Flow Frequency Return Periods at Point of Compliance (cfs)
2-yr	0.124
10-yr	0.214
25-yr	0.273
50-yr	0.323
100-yr	0.381

Table 4.6 – North Basin Developed and Upstream Peak Flows (POC 1)

Event	Flow Frequency Return Periods at Point of Compliance (cfs)
2-yr	0.866
10-yr	1.335
25-yr	1.620
50-yr	1.855
100-yr	2.110

The north vault will release mitigated flows to the onsite wetland via a dispersion trench. The design information is summarized in Table 4.7.

Table 4.7 – North Vault Design Information

Vault Live Storage Surface Area	7,560 sf
Live Storage Depth (incl. freeboard)	13.0 ft
Detention Volume	94,500 cf
Riser Height	12.5 ft
Riser Diam.	24 in
Orifice 1 Diam., Elev: 0.00 ft	3.875 in
Orifice 2 Diam., Elev: 8.70 ft	2.25 in
Orifice 3 Diam., Elev: 9.70 ft	2.50 in

The south vault will release mitigated flows to an existing catch basin within the Chain Lake Road ROW. The design information is summarized in Table 4.8.

Table 4.8 – South Vault Design Information

Vault Live Storage Surface Area	8,448 sf
Live Storage Depth (incl. freeboard)	13.0 ft
Detention Volume	105,600 cf
Riser Height	12.5 ft
Riser Diam.	24 in
Orifice 1 Diam., Elev: 0.00 ft	1.333 in
Orifice 2 Diam., Elev: 6.00 ft	1.25 in
Orifice 3 Diam., Elev: 10.00 ft	1.00 in

Conveyance System Analysis and Design

The project proposes to collect on-site runoff and convey it to one of the stormwater detention vaults prior to release. The north vault will release mitigated flows through a level spreader to the on-site wetland. The south vault will release mitigated flows to an existing catch basin in the Chain Lake Road right-of-way. Surface runoff will be collected by roof drains, roadway and yard inlets, and a system of below grade pipes on the site.

An analysis of the capacity of the conveyance facilities for the project will be performed during final engineering using a standard backwater approach.

Water Quality Treatment

Basic water quality treatment, per Minimum Requirement #6, is required for surface water runoff from all new pollution generating surfaces created with development of the site. Water quality treatment will be provided by two water quality filter structures, with one being located upstream of each detention vault. Contech StormFilters will be used as requested by the City of Monroe. Sizing and specifications of the water quality facilities will be provided with the final storm drainage report.

SECTION 5 – Construction Stormwater Pollution Prevention Plan

Storm Water Pollution Prevention Plan (SWPPP)

1. *Mark Clearing Limits*
   To prevent disturbance of project areas not designated for construction, a construction clearing limits fence or silt fence will be installed by the Contractor along the perimeter of the project site to protect existing native area outside of the mitigation area. These fences will be installed in accordance with the details and specifications provided in the Plans prior to any clearing and grading activities. All sensitive areas and buffers shall also be fenced prior to construction activities.

2. *Establish Construction Access*
   Heavy truck and equipment access during construction shall be limited to locations from Chain Lake Road. The contractor shall employ appropriate BMP measures to prevent transport of sediment offsite by motor vehicles.

3. *Control Flow Rates*
   The contractor will be responsible for installing temporary erosion control BMP's to control the release rate and water quality of surface water from active construction areas.

4. *Install Sediment Controls*
   On-site sediment retention will be controlled by a combination of silt fences, temporary sediment traps, and temporary interceptor trenches as shown on the Plans. Appendix F includes sizing calculations for the proposed temporary sediment traps. The contractor shall inspect and provide regular maintenance of these facilities throughout the duration of construction to ensure maximum sediment control.

5. *Stabilize Soils*
   Temporary and permanent cover measures will be provided by the Contractor to protect disturbed areas. Straw mulching is typically used to provide temporary protection from erosion at exposed soil areas. Plastic covering may also be used in order to protect cut and fill slopes, and/or to encourage grass growth in newly seeded areas. Disturbed areas that remain unworked for at least 7 days will be seeded and mulched to provide permanent cover measure and to limit erosion potential.

   Water will be used by the Contractor as allowed by local agency regulations and applicable SWMM standards to prevent wind transport of exposed soils. Exposed soils will be sprayed until wet and re-sprayed as needed during dry weather periods.

6. *Protect Slopes*
   The project does not require any disturbance of soils within steep slope or erosion hazard areas. Temporary and permanent seeding to stabilize exposed soil areas is expected to be sufficient for protecting on-site slopes—whether constructed or at disturbed native areas. Plastic covering may also be used to protect cut and fill slopes if seasonal limitations warrant and/or to encourage grass growth in newly seeded areas. The contractor shall take all practical efforts including installation of temporary interceptor ditches to direct potential storm water runoff away from the top of on-site slopes.

7. *Protect Drain Inlet*
   All storm drain inlets made operable during construction or otherwise existing in the vicinity of work areas shall be protected using pre-manufactured filter fabric catch basin inserts to protect against construction storm water runoff entering the conveyance system. The Contractor will be responsible for maintenance of all temporary sediment control BMP's during construction, including removal of accumulated sediment, as well as for the ultimate removal of these controls and remaining accumulated sediment upon completion of construction.

8. *Stabilize Channels and Outlets*
   Methods of protection may include silt fence installation and maintenance, catch basin inserts, and temporary interceptor ditches. Vegetated areas shall be maintained whenever possible or practical to provide for natural filtration of construction storm water discharges.

9. *Control Pollutants*
   Special provisions shall be taken to reduce the risk of pollutant contamination from the construction access, concrete handling/wash areas, and sawcutting/surfacing activities. No water used in or contacting areas of construction shall be allowed to drain directly towards on-site buffer areas or wetlands without prior treatment. Vehicle maintenance shall only be performed at approved on-site areas and only after proper containment devices are in place downstream of those areas. Any flammable or otherwise hazardous liquids shall be stockpiled only at the approved construction staging area.

10. *Control Dewatering*
    Temporary dewatering efforts may be required to facilitate some elements of construction such as storm drainage and utilities installation. Any such dewatering volumes encountered will be collected and controlled using pumps and sediment traps or tanks. Discharge from these controlled onsite facilities will be dispersed to approved areas of native vegetation or otherwise treated using setting tanks or other mechanical filtration facilities prior to release to downstream systems as required to conform with General Construction Stormwater permit standards.

11. *Maintain BMPs*
    All TESC measures will be inspected and maintained on a regular basis following the maintenance requirements identified for each in the Plans and/or the project's Storm Water Pollution Prevention Plan (SWPPP). An ESC supervisor will be designated by the Contractor and the name, address and phone number of the ESC supervisor will be given to the regulatory jurisdiction prior to the start of construction.

    The ESC supervisor will inspect the site at least once a month during the dry season, weekly during the wet season, and within 24 hours of each runoff-producing storm event. An ESC maintenance report will be used as a written record of all maintenance in accordance with the project SWPPP

12. *Manage the Project*

    The Contractor will be responsible for the phasing of erosion and sediment controls during construction so that they are adequately coordinated with all construction activities. The Contractor will be responsible for maintenance of all temporary sediment control BMP's during construction, including removal of accumulated sediment, as well as for the ultimate removal of

these controls and cleaning of existing permanent storm drainage facilities upon completion of construction.

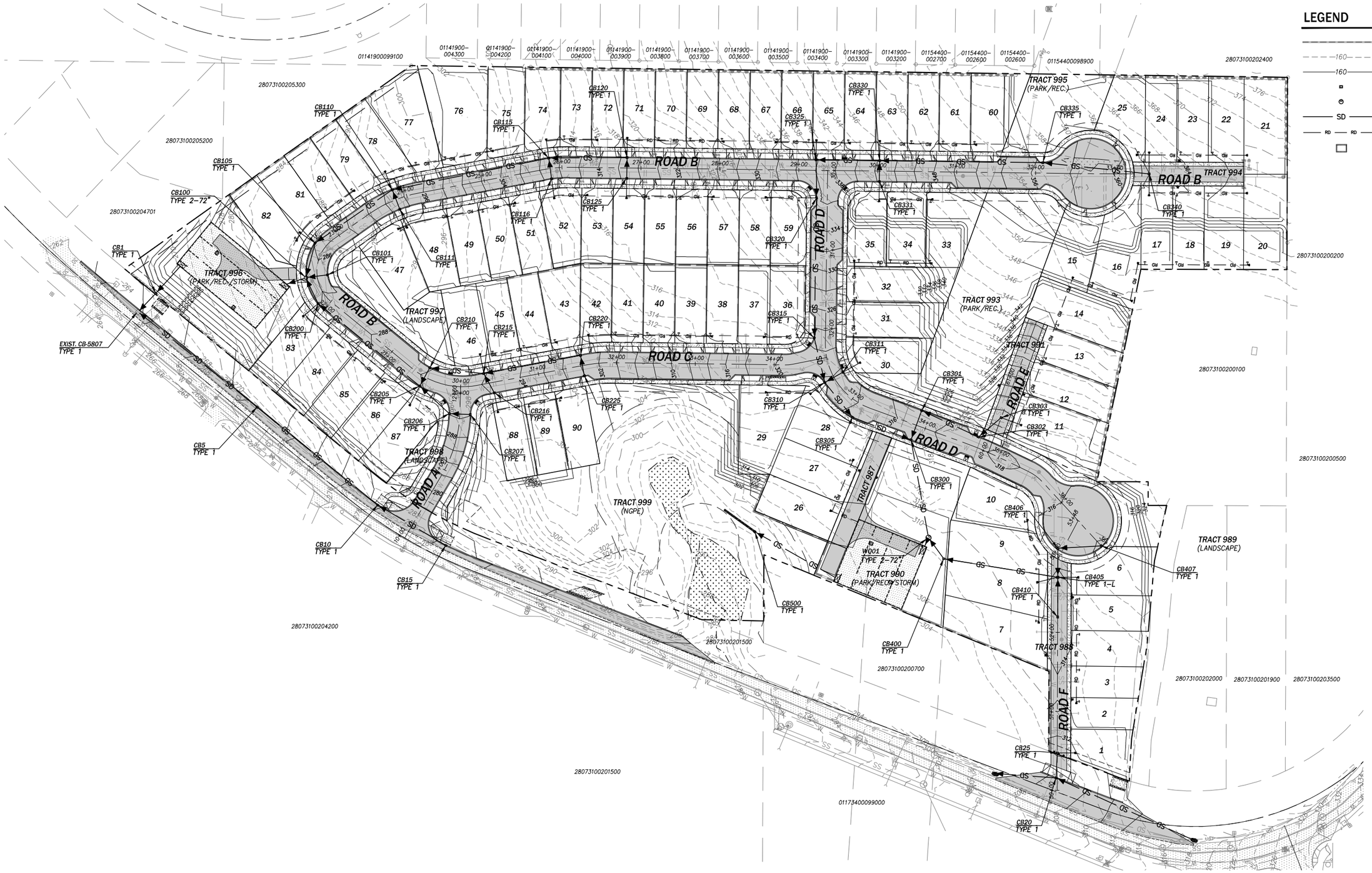
13. *Protect Low Impact Development BMPs*

    The project geotechnical engineer determined that the onsite soils are not favorable for infiltrative BMPs. As such, no low impact development BMPs are proposed with this project. No special protection is required.

CP|H
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FIGURES


CHAIN LAKE RD
PARCEL C
TPN 280731002039000
GARIBALDI LAKE,
PARCEL B
TPN 280731002016000
GARIBALDI LAKE,
PARCEL A
TPN 280731002008000
GARIBALDI LAKE,
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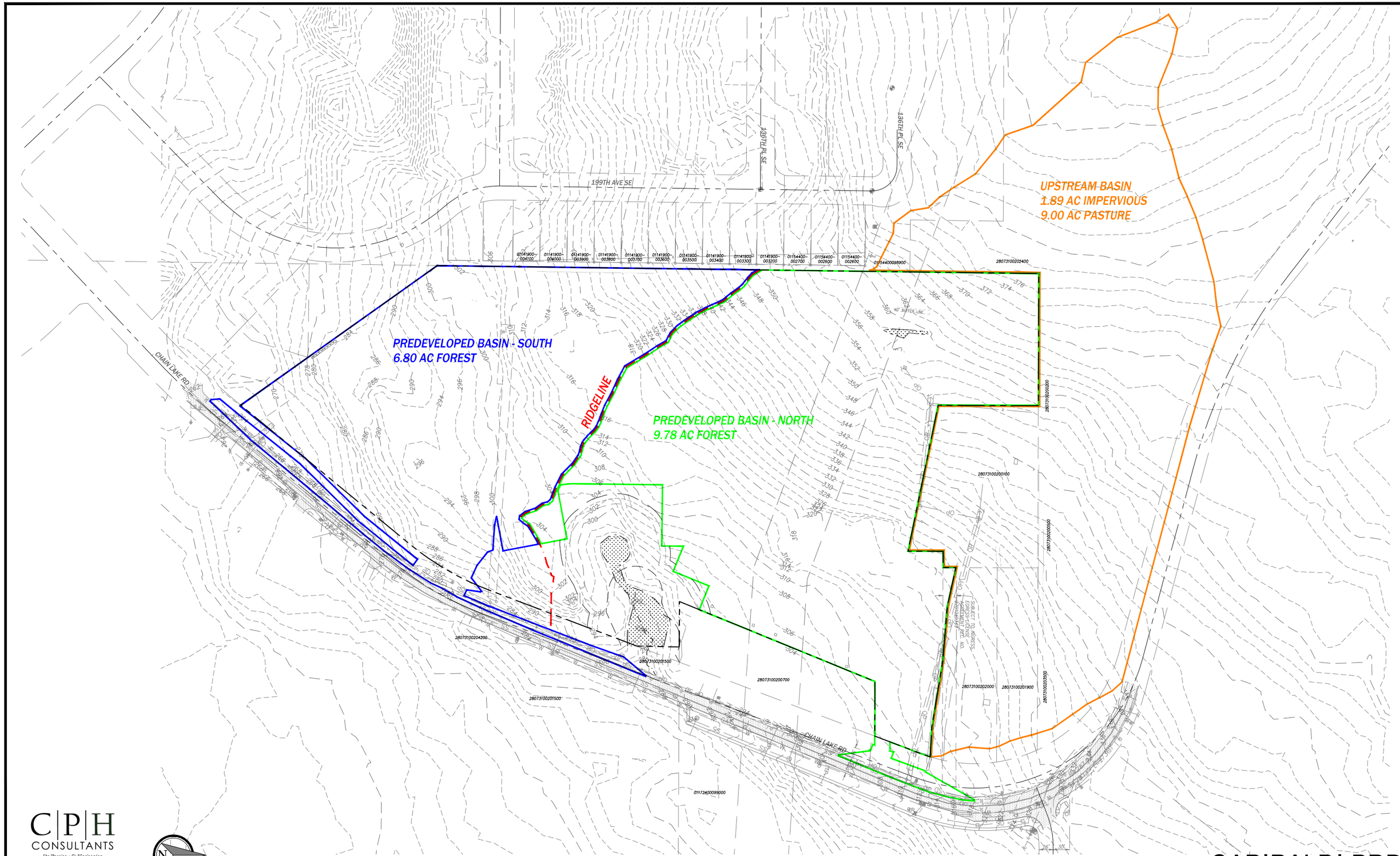
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0 60 120
PLAN IN FEET

GARIBALDI PRD

Figure 3 - Developed Site Conditions

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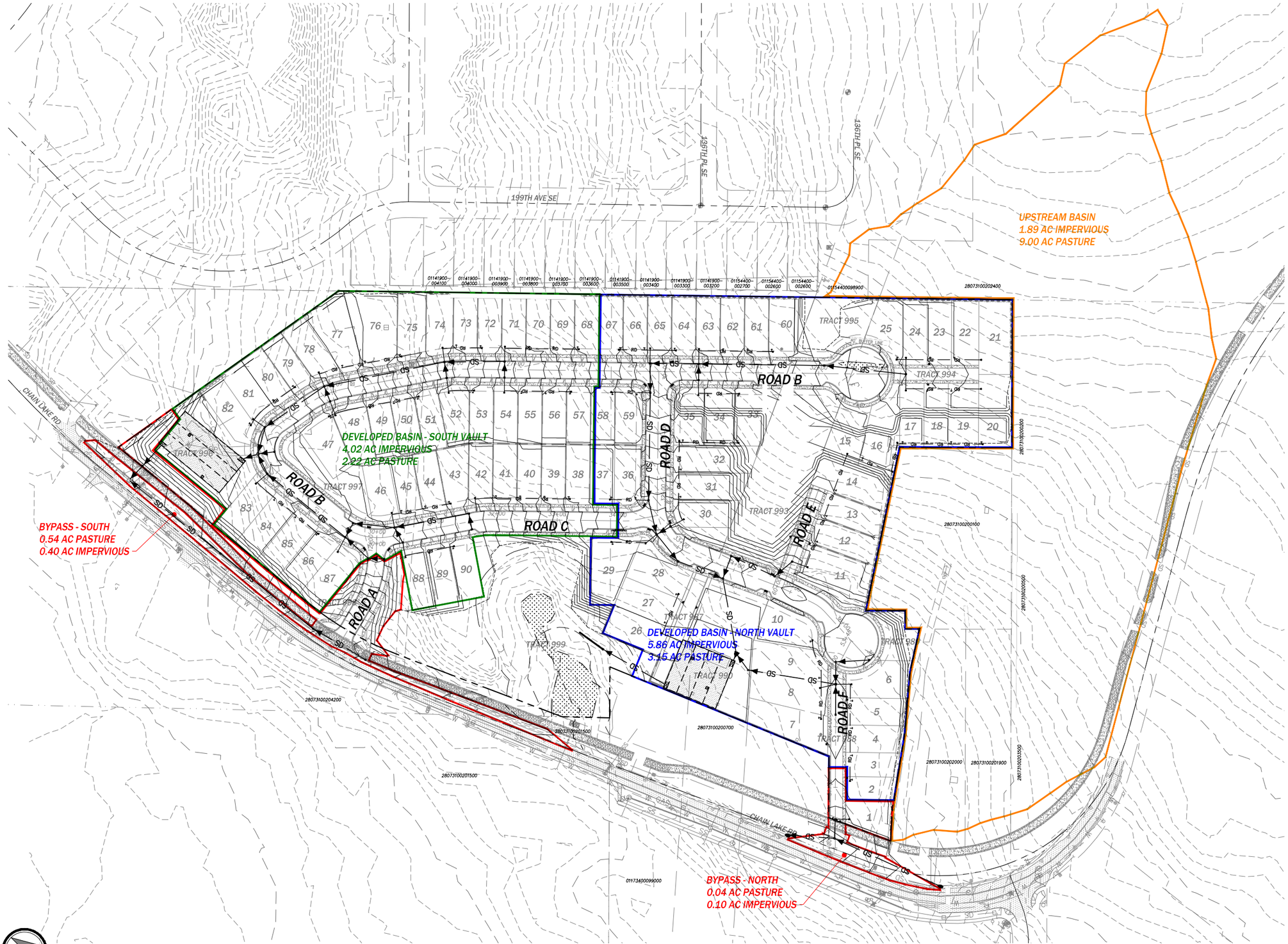
C|P|H
CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

N

0 80 160
PLAN IN FEET

GARIBALDI PRD

Figure 4 - Predeveloped Drainage Basins



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Figure 5 - Developed Drainage Basins

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APPENDIX A

NRCS SOILS REPORT AND GEOTECHNICAL REPORT



Map Scale: 1:2,570 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Snohomish County Area, Washington
Survey Area Data: Version 22, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 26, 2018—Oct 16, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

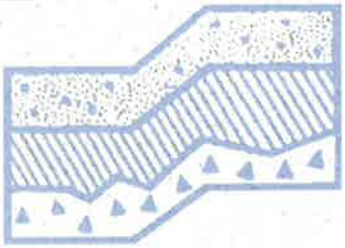
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
72	Tokul gravelly medial loam, 0 to 8 percent slopes	9.8	57.7%
73	Tokul gravelly medial loam, 8 to 15 percent slopes	7.2	42.3%
Totals for Area of Interest		**17.0**	**100.0%**

GEOTECHNICAL REPORT

Garibaldi Property
13424 and 13624 Chain Lake Road
Monroe, Washington

Project No. T-8079



Terra Associates, Inc.

Prepared for:

Garibaldi Lake, LLC
Kirkland, Washington

December 14, 2018

TERRA ASSOCIATES, Inc.
Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

December 14, 2018
Project No. T-8079

Ms. Melanie Davies
Garibaldi Lake, LLC
1010 Market Street
Kirkland, Washington 98033

Subject: Geotechnical Report
Garibaldi Property
13424 and 13624 Chain Lake Road
Monroe, Washington

Dear Ms. Davies:

As requested, we conducted a geotechnical engineering study for the subject project. The attached report presents our findings and recommendations for the geotechnical aspects of project design and construction.

Our study indicates the site soils predominantly consist of glacial till deposits comprised of weathered and unweathered horizons of silty sand with gravel. Perched groundwater seepage was observed at depths of two to four feet in nine of the ten of the test pits excavated at the site.

In our opinion, there are no geotechnical conditions that would preclude the planned residential development. Buildings can be supported on conventional spread footings bearing on competent native soils or on structural fill placed on competent native soils. Floor slabs and pavements can be similarly supported.

Detailed recommendations addressing these issues and other geotechnical design considerations are presented in the attached report. We trust the information presented is sufficient for your current needs. If you have any questions or require additional information, please call.

Sincerely yours,
TERRA ASSOCIATES, INC.

Kevin P. Roberts, P.E.
Geotechnical Engineer

Theodore J. Schepper, P.E.
President

12-14-18

12220 113th Avenue NE, Ste. 130, Kirkland, Washington 98034
Phone (425) 821-7777 • Fax (425) 821-4334

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Geotechnical Report
Garibaldi Property
13424 and 13624 Chain Lake Road
Monroe, Washington

1.0 PROJECT DESCRIPTION

We were provided Conceptual Site Plan prepared by CP|H Consultants, dated November 27, 2018. The site plan indicates the project consists of the construction of 61 residential building lots along with associated infrastructure improvements. A new roadway leading westward from Chain Lake Road will access the development. Based on an email from CP|H Consultants dated November 28, 2018, project stormwater will be directed to a single on-site detention vault facility located at the sites' southeast boundary. The moderately rolling site topography indicates that moderate grading will be required to achieve building and roadway elevations. We anticipate a combination of permanent cut and fill slopes and retaining walls will be used to achieve finished site grades.

We expect that the residential structures will be one- to two-story, wood-frame buildings, with their main floors framed over a crawl space or constructed at grade. Foundation loads should be relatively light, in the range of 2 to 3 kips per foot for bearing walls and 20 to 40 kips for isolated columns.

The recommendations contained in the following sections of this report are based on our understanding of the above design features. We should review design drawings as they become available to verify that our recommendations have been properly interpreted and incorporated into project design and to amend or supplement our recommendations, if required.

2.0 SCOPE OF WORK

We explored subsurface conditions at the site by observing conditions in ten test pits excavated to a maximum depth of 10 feet below existing surface grades using a track-mounted mini-excavator. Based on the results of our field study, laboratory testing, and analyses, we developed geotechnical recommendations for project design and construction. Specifically, this report addresses the following:

- Soil and groundwater conditions
- Geologic Hazards per Monroe Municipal Code
- Seismic design parameters per the current International Building Code (IBC)
- Site preparation and grading
- Excavations
- Foundations
- Slab-on-grade floors
- Infiltration feasibility
- Stormwater facilities
- Utilities
- Pavements

It should be noted that recommendations outlined in this report regarding drainage are associated with soil strength, design earth pressures, erosion, and stability. Design and performance issues with respect to moisture as it relates to the structure environment is beyond Terra Associates' purview. A building envelope specialist or contractor should be consulted to address these issues, as needed.

3.0 SITE CONDITIONS

3.1 Surface

The project site consists of 3 tax parcels totaling approximately 14 acres of land located at 13424 and 13624 Chain Lake Road in Monroe, Washington. The approximate location of the site is shown on Figure 1.

A single-family residence with several outbuildings currently occupies the largest northern parcel. This parcel is mainly open and vegetated with short grass. The southern and middle parcels, respectively, contain a single-family residence and greenhouse. These two parcels are primarily wooded with young to mature trees, with brush and lawn near the residence. Each of the parcels is accessed by graveled driveways leading westward from Chain Lake Road.

We observed at ground surface elevation the top surface of a large boulder (glacial erratic) in the vicinity of Test Pit TP-8. Based on its surface appearance, we estimate the buried boulder to be several feet in diameter.

At the northern parcel, existing surface gradients slope gently from northwest to southeast. Topography at the southern parcel is mostly level. A total topographic relief of approximately 90 feet exists from this sites' northwest to southeast corners. No standing or flowing water, springs, zones of emergent groundwater, or indications of soil erosion or instability were seen during our field exploration.

3.2 Soils

The soils observed in the test pits generally consist of about four to ten inches of sod and topsoil overlying weathered and unweathered horizons of glacial till deposits.

Each test pit showed a weathered horizon of till soils extending to depths ranging from 1.5 feet in Test Pit TP-9 to 3.5 feet in Test Pit TP-6. The weathered soils generally consist of silty fine sand and sand/silt with gravel and cobbles. This upper soil horizon has weathered to a medium dense condition.

Unweathered till soils were observed beneath the weathered layer in each test pit. These soils primarily consist of silty sand with variable gravel, cobble, and boulder contents. We observed the lower unweathered soils to be in a dense to very dense condition having varying degrees of cementation. The unweathered till soils were encountered to the total depths of each of our test pits.

The *Surficial Geologic Map of the Skykomish and Snoqualmie Rivers Area, Snohomish and King Counties, Washington,* by D.B. Booth (1990) shows the site underlain by Vashon till (Qvt). The soils we observed in our test pits are consistent with the published description of this soil unit.

Detailed descriptions of the subsurface conditions we observed in the test pits are presented on the Test Pit Logs in Appendix A. The approximate locations of the test pits are shown on Figure 2.

3.3 Groundwater

We observed groundwater seepage in all test pits except Test Pit TP-10. Light to heavy seepage flows were observed at depths ranging from two to four feet. The seepage primarily occurs as interflow, which is seepage perched within the basal portion of a weathered till layer on top of the underlying, relatively impermeable till soils. Observed differential flow rates from walls of the test pits indicate an overall northwest-to-southeast groundwater flow gradient.

Perched groundwater levels and flow rates will fluctuate seasonally, and typically reach their highest levels during and shortly following the wet winter and early spring months (November through April). Accordingly, we expect that the seepage flow rates and levels observed in the test pits were near their seasonal highs.

3.4 Geologic Hazards

We evaluated site conditions for the presence of "geologically hazardous areas" as defined in Section 20.05.120 of the Monroe Municipal Code (MMC). Discussions related to erosion, landslide, and seismic hazards are given below.

3.4.1 Erosion Hazard Areas

Section 20.05.120B.1. of the MMC defines erosion hazard areas as those areas "identified by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as having severe or very severe rill, and inter-rill erosion hazard..."

The NRCS has mapped the site soils as *Tokul gravelly medial loam, 0 to 8 percent slopes* and *Tokul gravelly medial loam, 8 to 15 percent slopes* at the sites' southern northern areas, respectively. The erosion hazard of each of these soil types is described as slight, and therefore, do not meet the above criteria defining an erosion hazard area.

The site soils will be susceptible to erosion when exposed during construction. In our opinion, proper implementation and maintenance of Best Management Practices (BMPs) for erosion prevention and sedimentation control will adequately mitigate the erosion potential in the planned development area. Erosion protection measures as required by the City of Monroe will need to be in place prior to and during grading activity on the site.

3.4.2 Landslide Hazard Areas

We reviewed definitions of Landslide Hazard Areas listed in Section 20.05.120B.2. of the MMC. Based on our field observations, site slope gradients as shown on the site plan, and the inherent high strength of the soils underlying the site, no landslide hazard areas as defined by MMC exist at the site.

3.4.3 Seismic Hazard Areas

Section 20.05.120B.3. of the MMC defines seismic hazard areas as "areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface failure.

Based on the site topography and the presence of glacially consolidated soils, it is our opinion that the risk for damage resulting from earthquake-induced slope failure, settlement, lateral spreading, surface failure, or soil liquefaction is negligible. Therefore, in our opinion, unusual seismic hazard areas do not exist at the site, and design in accordance with local building codes for determining seismic forces would adequately mitigate impacts associated with ground shaking.

3.5 Seismic Design Parameters

Based on the site soil conditions and our knowledge of the area geology, per the 2015 International Building Code (IBC), site class "C" should be used in structural design. Based on this site class, in accordance with the 2015 IBC, the following parameters should be used in computing seismic forces:

Seismic Design Parameters (IBC 2015)

Spectral response acceleration (Short Period), S_{Ms}	1.171 g
Spectral response acceleration (1 – Second Period), S_{M1}	0.602 g
Five percent damped 0.2 second period, S_{Ds}	0.780 g
Five percent damped 1.0 second period, S_{D1}	0.401 g

The above values were determined using the United States Geological Survey (USGS) online ground motion parameter calculator accessed on December 10, 2018.

4.0 DISCUSSION AND RECOMMENDATIONS

4.1 General

Based on our study, there are no geotechnical conditions that would preclude the planned development. In general, structures can be supported on conventional spread footings bearing on competent native soils, or on structural fill placed on the competent native soils. Floor slabs and pavements can be similarly supported.

The majority of the soils at the site contain a sufficient amount of fines (silt- and clay-sized particles) such that they will be difficult to compact as structural fill when too wet or too dry. If grading activities will take place during the winter season, the owner should be prepared to import free-draining granular material for use as structural fill and backfill.

Perched moderate to heavy groundwater seepage flows were observed within the basal portion of the weathered till at some of the test pit locations. Depending on planned site grades, some areas may require the construction interceptor drains to reduce potential seepage impacts to lots and roadways. Specific areas requiring additional subsurface drainage can be determined based on a review of the final grading plans.

Detailed recommendations regarding these issues and other geotechnical design considerations are provided in the following sections of this report. These recommendations should be incorporated into the final design drawings and construction specifications.

4.2 Site Preparation and Grading

To prepare the site for construction, all vegetation, organic surface soils, and demolition debris should be stripped and removed from the site. We expect surface stripping depths of about 4 to 10 inches will be required to remove the topsoil. Organic soils will not be suitable for use as structural fill but may be used for limited depths in nonstructural areas or for landscaping purposes.

Demolition of existing structures should include removal of existing foundations and abandonment of underground septic systems and other buried utilities. Abandoned utility pipes that fall outside of new building areas can be left in place provided they are sealed to prevent intrusion of groundwater seepage and soil. Cut and fill operations can be initiated once clearing and grubbing operations are complete.

A representative of Terra Associates, Inc. should examine all bearing surfaces to verify that conditions encountered are as anticipated and are suitable for placement of structural fill or direct support of building and pavement elements. Our representative may request proofrolling exposed surfaces with a heavy rubber-tired vehicle to determine if any isolated soft and yielding areas are present. If unstable yielding areas are observed, they should be cut to firm bearing soil and filled to grade with structural fill. In pavement areas, if the depth of excavation to remove unstable soils is excessive, use of geotextile fabric such as Mirafi 500X or equivalent in conjunction with clean granular structural fill can be considered in order to limit the depth of removal.

The site soils at the site contain a sufficient amount of fines (silt and clay size particles) that will make them difficult to compact as structural fill if they are too wet or too dry. In addition, laboratory testing and the observed wet condition of the upper till soils indicate they are several percentage points above their optimum moisture contents required for compaction. The ability to use these soils from site excavations as structural fill will depend on their moisture content and the prevailing weather conditions when site grading activities take place. Soils that are too wet to properly compact could be dried by aeration during dry weather conditions, or mixed with an additive such as cement or lime to stabilize the soil and facilitate compaction. If an additive is used, additional Best Management Practices (BMPs) for its use will need to be incorporated into the Temporary Erosion and Sedimentation Control (TESC) plan for the project.

We recommend removing cobbles larger than six inches and boulders from the fill prior to placement and compaction.

If grading activities are planned during the wet winter months, or if they are initiated during the summer and extend into fall and winter, the owner should be prepared to import wet weather structural fill.

For this purpose, we recommend importing a granular soil that meets the following grading requirements:

U.S. Sieve Size	Percent Passing
6 inches	100
No. 4	75 maximum
No. 200	5 maximum*

*Based on the 3/4-inch fraction.

Prior to use, Terra Associates, Inc. should examine and test all materials imported to the site for use as structural fill.

Structural fill should be placed in uniform loose layers not exceeding 12 inches and compacted to a minimum of 95 percent of the soil's maximum dry density, as determined by American Society for Testing and Materials (ASTM) Test Designation D-698 (Standard Proctor). The moisture content of the soil at the time of compaction should be within two percent of its optimum, as determined by this ASTM standard. In nonstructural areas, the degree of compaction can be reduced to 90 percent.

4.3 Excavations

All excavations at the site associated with confined spaces, such as utilities and lower building level retaining walls, must be completed in accordance with local, state, and federal requirements. Based on the Washington State Safety and Health Administration (WSHA) regulations, the sites' upper medium dense soils would be classified as Type C soils. The dense to very dense, cemented till soils would be classified as Type A soils.

Accordingly, for temporary excavations of more than 4 feet and less than 20 feet in depth, the side slopes in Type C soils should be laid back at a slope inclination of 1.5:1 (Horizontal:Vertical) or flatter. If there is insufficient lateral space to complete the excavations in the manners discussed above, or if excavations greater than 20 feet deep are planned, you may need to use temporary shoring to support the excavations.

For Type A soils, side slopes can be laid back at a slope inclination of 0.75:1 or flatter. For temporary excavation slopes less than 8 feet in height in Type A soils, the lower 3.5 feet can be cut to a vertical condition, with a 0.75:1 slope graded above. For temporary excavation slopes greater than 8 feet in height up to a maximum height of 12 feet, the slope above the 3.5-foot vertical portion will need to be laid back at a minimum slope inclination of 1:1.

Deep excavations that expose perched seepage in till can likely be dewatered by conventional sump-pumping procedures along with a system of collection trenches. Temporary dewatering trenches upgradient of excavations may also be considered in areas of heavy interflow seepage.

The above information is provided solely for the benefit of the owner and other design consultants and should not be construed to imply that Terra Associates, Inc. assumes responsibility for job site safety. It is understood that job site safety is the sole responsibility of the project contractor.

4.4 Foundations

Residential structures may be supported on conventional spread footing foundations bearing on competent native soils or on structural fill placed above the native soils. Foundation subgrades should be prepared as recommended in Section 4.2 of this report.

Perimeter foundations exposed to the weather should bear at a minimum depth of 1.5 feet below final exterior grades for frost protection. Interior foundations can be constructed at any convenient depth below the floor slab. We recommend designing foundations for a net allowable bearing capacity of 2,500 pounds per square foot (psf). For short-term loads, such as wind and seismic, a one-third increase in this allowable capacity can be used in design. With the anticipated loads and this bearing stress applied, building settlements should be less than one-half inch total and one-fourth inch differential.

For designing foundations to resist lateral loads, a base friction coefficient of 0.35 can be used. Passive earth pressure acting on the sides of the footings may also be considered. We recommend calculating this lateral resistance using an equivalent fluid weight of 300 pounds per cubic foot (pcf). We recommend not including the upper 12 inches of soil in this computation because they can be affected by weather or disturbed by future grading activity. This value assumes the foundations will be constructed neat against competent native soil or the excavations are backfilled with structural fill, as described in Section 4.2 of this report. The recommended passive and friction values include a safety factor of 1.5.

4.5 Slab-on-Grade Floors

Slab-on-grade floors may be supported on a subgrade prepared as recommended in Section 4.2 of this report. Immediately below the floor slab, we recommend placing a four-inch thick capillary break layer composed of clean, coarse sand or fine gravel that has less than three percent passing the No. 200 sieve. This material will reduce the potential for upward capillary movement of water through the underlying soil and subsequent wetting of the floor slab.

The capillary break layer will not prevent moisture intrusion through the slab caused by water vapor transmission. Where moisture by vapor transmission is undesirable, such as covered floor areas, a common practice is to place a durable plastic membrane on the capillary break layer and then cover the membrane with a layer of clean sand or fine gravel to protect it from damage during construction, and aid in uniform curing of the concrete slab. It should be noted that if the sand or gravel layer overlying the membrane is saturated prior to pouring the slab, it will be ineffective in assisting uniform curing of the slab, and can actually serve as a water supply for moisture transmission through the slab that can subsequently affect floor coverings. Therefore, in our opinion, covering the membrane with a layer of sand or gravel should be avoided if floor slab construction occurs during the wet winter months and the layer cannot be effectively drained. We recommend floor designers and contractors refer to the current American Concrete Institute (ACI) Manual of Concrete Practice for further information regarding vapor barrier installation below slab-on-grade floors.

4.6 Infiltration Feasibility

Based on our study, it is our opinion that subsurface conditions observed in the test pits are not favorable for stormwater infiltration. This is due primarily to the relatively high fines content and dense and/or cemented nature of the till-like soils.

4.7 Stormwater Facilities

Current information indicates a stormwater detention vault is planned for the project. As an option, we are also providing geotechnical recommendations for stormwater pond design and construction.

Detention Vault

Vault foundations supported by the very dense till soils may be designed for an allowable bearing capacity of 5,000 pounds per square foot (psf). For short-term loads, such as seismic, a one-third increase in this allowable capacity can be used. Friction at the base of the vault foundations and passive earth pressures will provide resistance to the lateral loads. These values are provided in Section 4.4.

The magnitude of earth pressures developing on the vault walls will depend in part on the quality and compaction of the wall backfill. To prevent development of hydrostatic pressure and uplift on the vault, wall drainage must be installed. Vault wall drainage should consist of a minimum 4-inch diameter perforated PVC pipe placed around the perimeter of the vault at an elevation no higher than its dead storage elevation. The drain pipe should be enveloped in drainage aggregate that extends as a 12-inch thick layer to the top of the vault. Alternatively, prefabricated drainage panels such as Miradrain G100N can be substituted for the 12-inch gravel drainage layer. The panels should extend at least six inches into the drainage aggregate surrounding the perforated drain pipe.

With the recommended wall backfill and drainage, we recommend designing the vault walls for an earth pressure imposed by an equivalent fluid weighing 50 pcf. Any portion of the wall for which drainage cannot be provided should be designed for an earth pressure equivalent to a fluid weighing 85 pcf. For evaluating walls under seismic loading, an additional uniform earth pressure equivalent to 8H psf, where H is the height of the below-grade wall in feet, can be used. These values assume a horizontal backfill condition. Where applicable, a uniform horizontal traffic surcharge value of 75 psf should be included in design of vault walls.

Detention Pond

Based on the results of our test pit explorations, we expect that very dense till soils would be exposed at stormwater detention pond bottom elevations. If fill berms will be constructed, the berm locations should be stripped of topsoil, duff, and soils containing organic material prior to the placement of fill. The fill berms should be constructed by placing structural fill in layers no more than 12 inches thick and compacting the lifts to a minimum of 95 percent of the soil's maximum dry density, as determined by American Society for Testing and Materials (ASTM) Test Designation D-1557 (Modified Proctor). Material used to construct pond berms should consist of predominately granular soils with a maximum size of 3 inches and a minimum of 20 percent fines. The results of laboratory testing indicate that till soils would meet this gradational requirement. Terra Associates, Inc. should examine and test on-site soils, or imported materials proposed for use as berm fill prior to their use.

Because of exposure to fluctuating stored water levels, soils exposed on the interior side slopes of the ponds may be subject to some risk of periodic shallow instability or sloughing. Establishing interior slopes at a 3:1 gradient will significantly reduce or eliminate this potential. Exterior berm slopes and interior slopes above the maximum water surface should be graded to a finished inclination no steeper than 2:1. Finished slope faces should be thoroughly compacted and vegetated to guard against erosion.

4.8 Utilities

Utility pipes should be bedded and backfilled in accordance with American Public Works Association (APWA) or City of Monroe requirements. At minimum, trench backfill should be placed and compacted as structural fill as described in Section 4.2 of this report. Soils excavated on-site should generally be suitable for use as backfill material. However, the vast majority of the upper site soils are fine grained and moisture sensitive; therefore, moisture conditioning may be necessary to facilitate proper compaction. If utility construction takes place during the winter, it may be necessary to import suitable wet weather fill for utility trench backfilling.

4.9 Pavements

Pavement subgrade should be prepared as described in the Section 4.2 of this report. Regardless of the degree of relative compaction achieved, the subgrade must be firm and relatively unyielding before paving. The subgrade should be proofrolled with heavy rubber-tire construction equipment such as a loaded 10-yard dump truck to verify this condition.

The pavement design section is dependent upon the supporting capability of the subgrade soils and the traffic conditions to which it will be subjected. For residential access, with traffic consisting mainly of light passenger vehicles with only occasional heavy traffic, and with a stable subgrade prepared as recommended, we recommend the following options for pavement sections:

- Two inches of hot mix asphalt (HMA) over four inches of crushed rock base (CRB)
- Full depth HMA – 3 ½ inches

The paving materials used should conform to the Washington State Department of Transportation (WSDOT) specifications for ½-inch class HMA and CRB.

Long-term pavement performance will depend on surface drainage. A poorly-drained pavement section will be subject to premature failure as a result of surface water infiltrating into the subgrade soils and reducing their supporting capability. For optimum pavement performance, we recommend surface drainage gradients of at least two percent. Some degree of longitudinal and transverse cracking of the pavement surface should be expected over time. Regular maintenance should be planned to seal cracks when they occur.

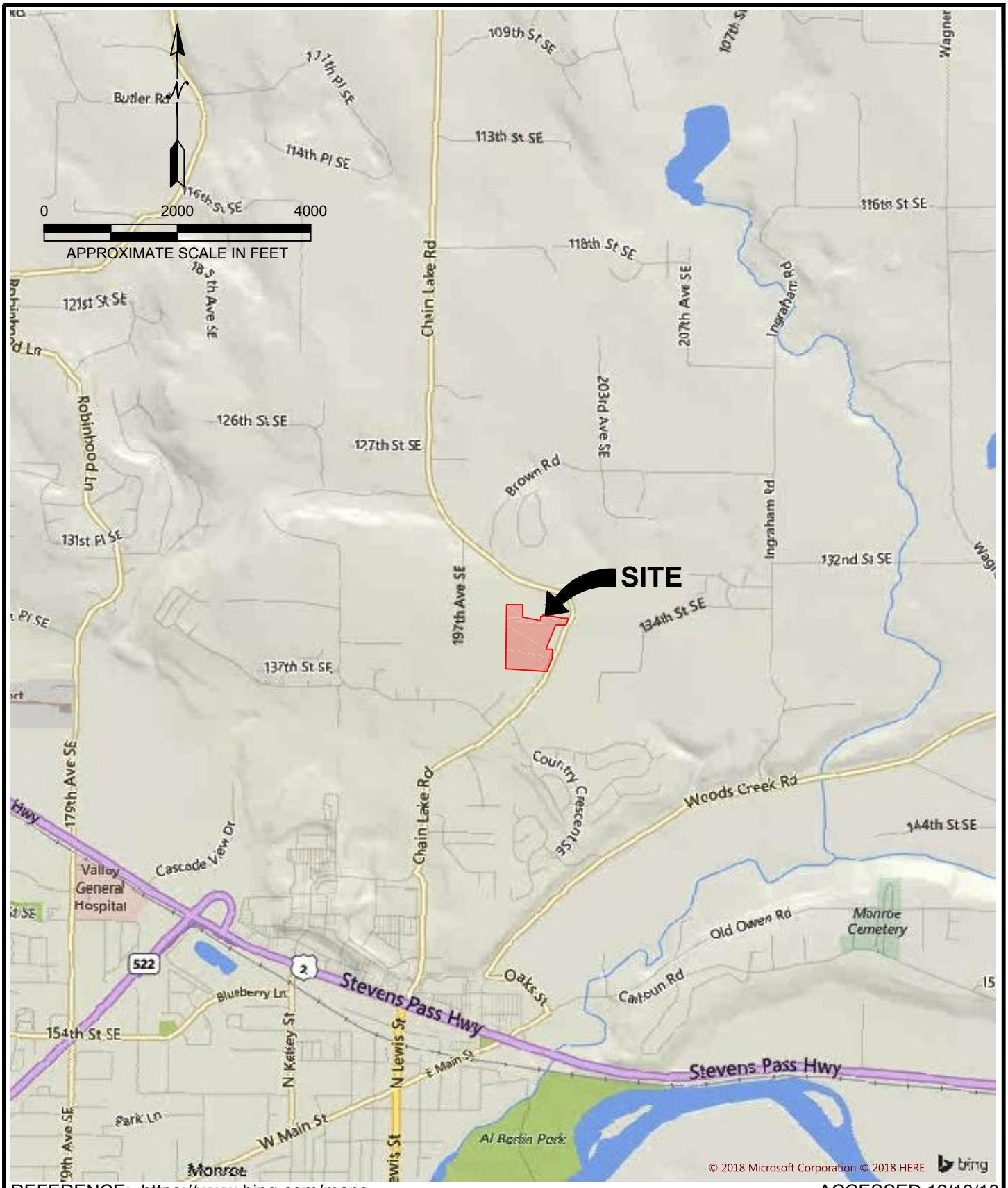
5.0 ADDITIONAL SERVICES

Terra Associates, Inc. should review the final designs and specifications in order to verify that earthwork and foundation recommendations have been properly interpreted and implemented in project design. We should also provide geotechnical services during construction in order to observe compliance with our design concepts, specifications, and recommendations. This will allow for design changes if subsurface conditions differ from those anticipated prior to the start of construction.

6.0 LIMITATIONS

We prepared this report in accordance with generally accepted geotechnical engineering practices. This report is the copyrighted property of Terra Associates, Inc. and is intended for specific application to the Garibaldi Property project in Monroe, Washington. This report is for the exclusive use of Garibaldi Lake, LLC and their authorized representatives. No other warranty, expressed or implied, is made.

The analyses and recommendations presented in this report are based on data obtained from our on-site test pits. Variations in soil conditions can occur, the nature and extent of which may not become evident until construction. If variations appear evident, Terra Associates, Inc. should be requested to reevaluate the recommendations in this report prior to proceeding with construction.



REFERENCE: https://www.bing.com/maps ACCESSED 12/13/18

Terra Associates, Inc.
Consultants in Geotechnical Engineering
Geology and
Environmental Earth Sciences

VICINITY MAP
GARIBALDI PROPERTY
MONROE, WASHINGTON

Proj.No. T-8079	Date: DEC 2018	Figure 1



NOTE:

THIS SITE PLAN IS SCHEMATIC. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE. IT IS INTENDED FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR DESIGN OR CONSTRUCTION PURPOSES.

REFERENCE: SITE PLAN PROVIDED BY CPH CONSULTANTS.

LEGEND:

APPROXIMATE TEST PIT LOCATION

0 120 240

APPROXIMATE SCALE IN FEET

Terra Associates, Inc.
Consultants in Geotechnical Engineering
Geology and
Environmental Earth Sciences

EXPLORATION LOCATION PLAN
GARIBALDI PROPERTY
MONROE, WASHINGTON

Proj.No. T-8079	Date: DEC 2018	Figure 2

APPENDIX A
FIELD EXPLORATION AND LABORATORY TESTING

Garibaldi Property
Monroe, Washington

On November 29, 2018, we investigated subsurface conditions at the site by excavating 10 test pits to a maximum depth of 10 feet below existing surface grades using a Takeuchi TB145 mini-excavator. The test pit locations are shown on Figure 2. The test pit locations were approximately determined in the field by sighting and pacing from existing surface features. The Test Pit Logs are presented on Figures A-2 through A-11.

A geologist from our office maintained a log of each test pit as it was excavated, classified the soil conditions encountered, and obtained representative soil samples. All soil samples were visually classified in the field in accordance with the Unified Soil Classification System. A copy of this classification is presented as Figure A-1.

Representative soil samples obtained from the test pits were placed in sealed plastic bags and taken to our laboratory for further examination and testing. The moisture content of each sample was measured and is reported on the Test Pit Logs. Grain size analyses were performed on six of the soil samples. The results are shown on Figures A-12 and A-13.

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTION
COARSE GRAINED SOILS: More than 50% material larger than No. 200 sieve size	**GRAVELS** More than 50% of coarse fraction is larger than No. 4 sieve	Clean Gravels (less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.
		Gravels with fines	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS More than 50% of coarse fraction is smaller than No. 4 sieve	Clean Sands (less than 5% fines)	SW	Well-graded sands, sands with gravel, little or no fines.
			SP	Poorly-graded sands, sands with gravel, little or no fines.
		Sands with fines	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS: More than 50% material smaller than No. 200 sieve size	**SILTS AND CLAYS** Liquid Limit is less than 50%		ML	Inorganic silts, rock flour, clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity. (Lean clay)
			OL	Organic silts and organic clays of low plasticity.
	SILTS AND CLAYS Liquid Limit is greater than 50%		MH	Inorganic silts, elastic.
			CH	Inorganic clays of high plasticity. (Fat clay)
			OH	Organic clays of high plasticity.
HIGHLY ORGANIC SOILS			PT	Peat.

DEFINITION OF TERMS AND SYMBOLS

COHESIONLESS

Density	Standard Penetration Resistance in Blows/Foot
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	>50

COHESIVE

Consistancy	Standard Penetration Resistance in Blows/Foot
Very Soft	0-2
Soft	2-4
Medium Stiff	4-8
Stiff	8-16
Very Stiff	16-32
Hard	>32

I	2" OUTSIDE DIAMETER SPILT SPOON SAMPLER
II	2.4" INSIDE DIAMETER RING SAMPLER OR SHELBY TUBE SAMPLER
▼	WATER LEVEL (Date)
Tr	TORVANE READINGS, tsf
Pp	PENETROMETER READING, tsf
DD	DRY DENSITY, pounds per cubic foot
LL	LIQUID LIMIT, percent
PI	PLASTIC INDEX
N	STANDARD PENETRATION, blows per foot

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UNIFIED SOIL CLASSIFICATION SYSTEM
GARIBALDI PROPERTY
MONROE, WASHINGTON

Proj.No. T-8079	Date: DEC 2018	Figure A-1

LOG OF TEST PIT NO. TP-1

FIGURE A-2

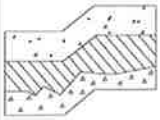
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 365 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2.5 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(5 inches SOD) Brown silty fine SAND/SILT, few gravels, moist to wet. (SM/ML) (Weathered till)	Medium Dense	45.9
2				
▼ 3		Gray-brown silty SAND, some gravel, few cobbles, fine to medium sand, moderately cemented, moist. (SM) (Till)		
4				
5				
6			Very Dense	12.7
7				
8				
9		Test pit terminated at approximately 9 feet. Moderate perched groundwater seepage at 2.5 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-2

FIGURE A-3

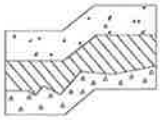
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 349 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 3 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(7 inches TOPSOIL) Brown silty fine SAND/SILT, few gravels, moist to wet. (SM/ML) (Weathered till)	Medium Dense	
1				
2		*2 feet: 2-foot boulder.		23.7
▼ 3		Gray-brown silty SAND, some gravel, few cobbles, trace boulders, fine to medium sand, moderately cemented, moist. (SM) (Till)		
4				
5				14.0
6			Very Dense	
7				
8				
9		Test pit terminated at approximately 9 feet. Moderate perched groundwater seepage at 3 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-3

FIGURE A-4

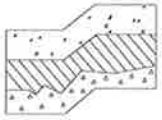
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 309 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
		(6 inches TOPSOIL) Light brown mottled silty fine SAND, few gravels, moist to wet. (SM) (Weathered till)	Medium Dense	16.6
3		Gray-brown silty SAND, some gravel and cobbles, fine to medium sand, wet. (SM) (Till)	Dense	
6		*6 feet: Moist, moderately cemented, very dense.	Very Dense	10.3
9		Test pit terminated at approximately 9 feet. Moderate perched groundwater seepage at 2 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-4

FIGURE A-5

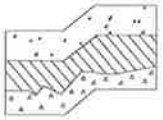
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 312 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(8 inches TOPSOIL) Light brown mottled silty fine SAND/SILT, few gravels, moist to wet. (SM/ML) (Weathered till)	Medium Dense	
▼ 2				32.2
3		Gray-brown silty SAND, some gravel, few cobbles, trace boulders, fine to medium sand, weakly cemented, moist to wet. (SM) (Till)		
4				
5				
6			Dense	
7				
8				10.7
9		Test pit terminated at approximately 9 feet. Light perched groundwater seepage at 2 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-5

FIGURE A-6

PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Brush **APPROX. ELEV:** 326 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 4 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
		(6 inches TOPSOIL) Brown silty SAND, few gravels, fine sand, moist. (SM) (Weathered till)	Medium Dense	
3		Brown-gray silty SAND, some gravel, few cobbles, fine to medium sand, strongly cemented, moist to wet. (SM) (Till)		38.4
▼ 4				
5		*5 feet: Very difficult digging.	Very Dense	
7				9.6
9		Test pit terminated at 9 feet due to excavator refusal. Light perched groundwater seepage at 4 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-6

FIGURE A-7

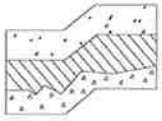
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Brush **APPROX. ELEV:** 322 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2.5 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(6 inches TOPSOIL) Brown silty SAND, few gravels, fine sand, moist. (SM) (Weathered till)	Medium Dense	
2				
▼ 3		*2.5 feet: Wet		35.8
4		Brown-gray silty SAND, some gravel and cobbles, fine to medium sand, wet. (SM) (Till)	Very Dense	
5		*5 feet: Very difficult digging.		
6				
7				
8				
9				11.7
10		Test pit terminated at approximately 10 feet. Moderate perched groundwater seepage at 2.5 feet. No caving.		
11				
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-7

FIGURE A-8

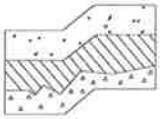
PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Brush **APPROX. ELEV:** 318 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 3 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(8 inches TOPSOIL/DUFF) Brown silty SAND, some gravel, fine sand, moist. (SM) (Weathered till) *1-foot: Breached an abandoned 4-inch PVC drainline.	Medium Dense	20.8
2				
▼ 3		Gray-brown mottled silty SAND, some gravel and cobbles, trace boulders, fine to medium sand, moist to wet. (SM) (Till)	Very Dense	9.8
4				
5				
6				
7				
8				
9		Test pit terminated at approximately 8.5 feet. Light perched groundwater seepage at 3 feet. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-8

FIGURE A-9

PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 338 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2.5 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(5 inches SOD) Brown silty SAND, some gravel, fine sand, moist. (SM) (Weathered till) *1-foot: 18-inch boulder.	Medium Dense	29.9
3		Gray-brown mottled silty SAND, some gravel and cobbles, trace boulders, fine to medium sand, moist. (SM) (Till)	Very Dense	13.1
10		Test pit terminated at approximately 9.5 feet. Heavy perched groundwater seepage at 2.5 feet. No caving.		
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-9

FIGURE A-10

PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** 348 Feet

DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** 2.5 Feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
1		(4 inches TOPSOIL) Brown silty SAND, few gravels, fine sand, moist. (SM) (Weathered till)	Loose	52.2
2		Gray-brown mottled silty SAND, some gravel, few cobbles, trace boulders, fine to medium sand, moderately cemented, moist. (SM) (Till)	Very Dense	14.0
9		Test pit terminated at approximately 9 feet. Light perched groundwater seepage at 1.5 feet. No caving.		
10				

▼ 2.5 feet

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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Environmental Earth Sciences

LOG OF TEST PIT NO. TP-10

FIGURE A-11

PROJECT NAME: Garibaldi Property **PROJ. NO:** T-8079 **LOGGED BY:** KR

LOCATION: Monroe, Washington **SURFACE CONDITIONS:** Brush **APPROX. ELEV:** 303 Feet

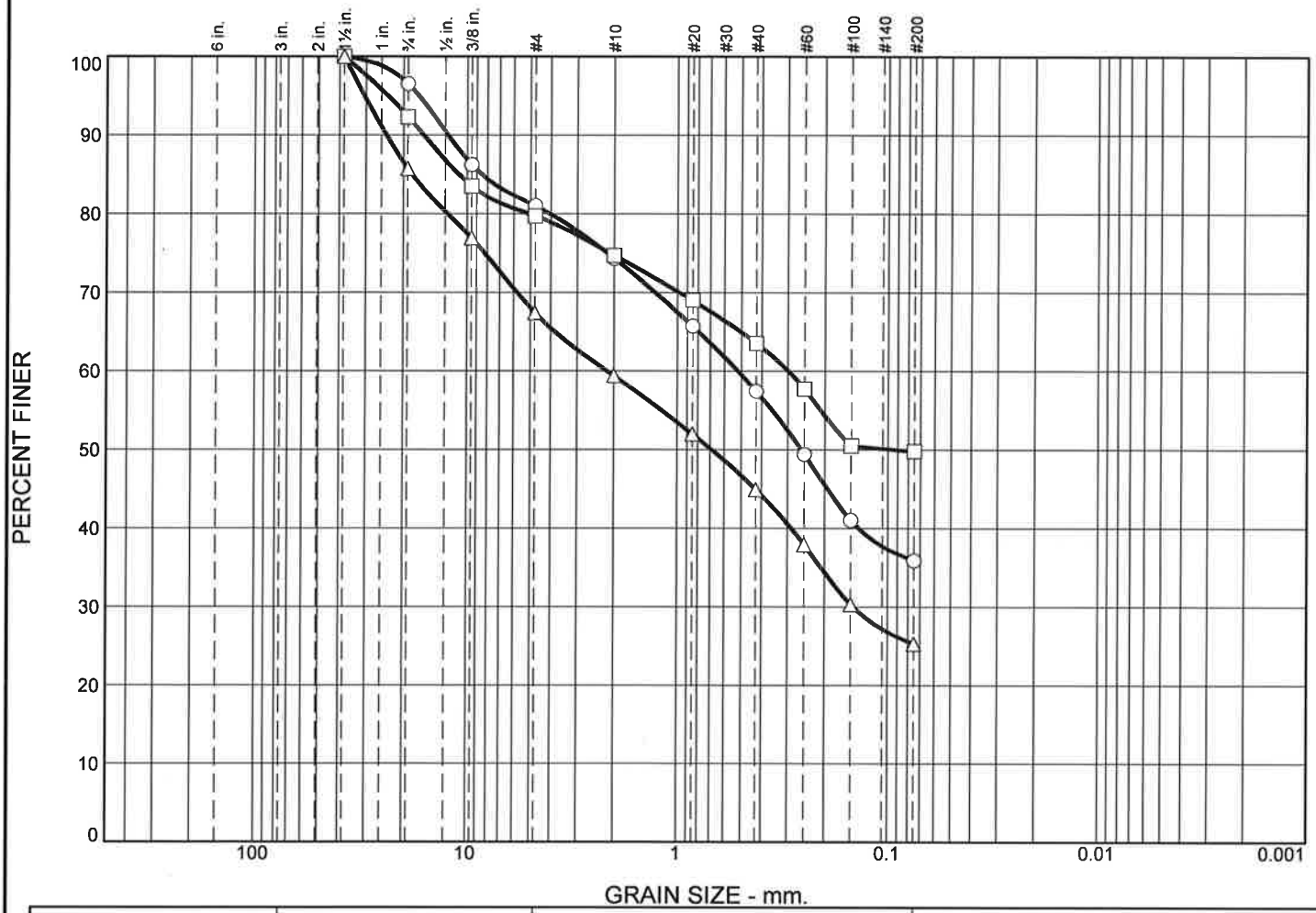
DATE LOGGED: November 29, 2018 **DEPTH TO GROUNDWATER:** N/A **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0				
		(10 inches TOPSOIL) Brown SILT with fine sand, few gravels, moist. (ML) (Weathered till)	Medium Dense	38.7
3		Brown-gray mottled silty SAND, some gravel, few cobbles, fine to medium sand, moderately cemented, moist. (SM) (Till)	Very Dense	8.7
9		Test pit terminated at approximately 9 feet. No groundwater. No caving.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	3.5	15.5	6.7	16.9	21.5	35.9	
□	0.0	7.7	12.6	5.0	11.2	13.7	49.8	
△	0.0	14.3	18.3	8.0	14.5	19.6	25.3	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			8.5605	0.5198	0.2590					
□			10.9888	0.2990	0.0914					
△			18.2182	2.1557	0.6888	0.1462				

	Material Description	USCS	AASHTO
○	Silty SAND	SM	
□	Silty SAND	SM	
△	Silty SAND	SM	

Project No. T-8079 **Client:** Garibaldi Lake, LLC

Project: Garibaldi Property

○ **Location:** TP-1 **Depth:** -6 feet

□ **Location:** TP-3 **Depth:** -2 feet

△ **Location:** TP-5 **Depth:** -7 feet

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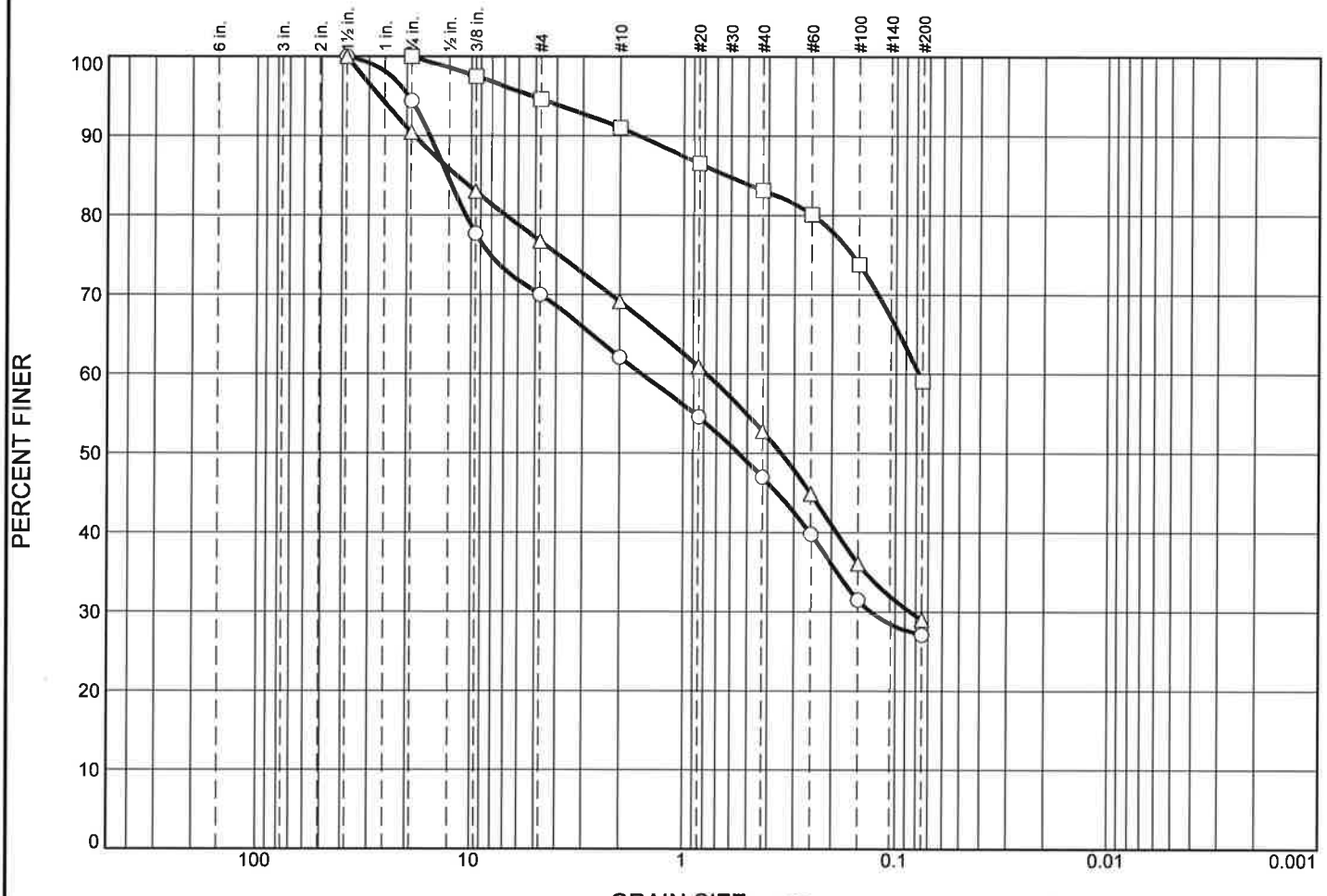
Kirkland, WA

Remarks:

Figure A-12

Tested By: FQ

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	5.6	24.4	7.9	15.1	19.9	27.1	
□	0.0	0.0	5.4	3.6	7.9	24.0	59.1	
△	0.0	9.6	13.7	7.6	16.3	23.8	29.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			12.8907	1.5730	0.5495	0.1308				
□			0.6343	0.0779						
△			11.6942	0.7809	0.3464	0.0849				

Material Description	USCS	AASHTO
○ Silty SAND	SM	
□ SILT	ML	
△ Silty SAND	SM	

Project No. T-8079 **Client:** Garibaldi Lake, LLC

Project: Garibaldi Property

○ **Location:** TP-7 **Depth:** -6 feet

□ **Location:** TP-10 **Depth:** -2.5 feet

△ **Location:** TP-10 **Depth:** -8 feet

Remarks:

Terra Associates, Inc.

Kirkland, WA

Figure A-13

Tested By: FQ

CP|H
CONSULTANTS

APPENDIX B

WWMH INPUT PARAMETERS AND RESULTS

Basin ID	Area (SF)	Imp. (SF)	Pervious (SF)
Tract 987	3917	3917	0
Tract 988	7041	6885	156
Tract 989	7134	0	7134
Tract 990	26913	2000	24913
Tract 991	4530	4530	0
Tract 992	1724	0	1724
Tract 993	29608	0	29608
Tract 994	4191	4191	0
Tract 995	9572	0	9572
Tract 996	30366	0	30366
Tract 997	7810	0	7810
Tract 998	1999	0	1999
Tract 999	2892	0	2892
ROW	142499	23008	119491
Lots	233621	140173	93448
Total	513817	184704	329113

Bypass			
Areas	Area (SF)	Imp. (SF)	Pervious (SF)
Bypass #1	41195	17540	23655
Bypass #2	7594	5980	1614

North Basin Lots			
Lot #	Area (SF)	Imp. (SF)	Pervious (SF)
1	4036	2422	1614
2	3362	2017	1345
3	3622	2173	1449
4	4374	2624	1750
5	4576	2746	1830
6	5669	3401	2268
7	6956	4174	2782
8	6334	3800	2534
9	6094	3656	2438
10	5601	3361	2240
11	6509	3905	2604
12	4451	2671	1780
13	4212	2527	1685
14	7177	4306	2871
15	5155	3093	2062
16	7069	4241	2828
17	4232	2539	1693
18	4232	2539	1693
19	5290	3174	2116
20	6644	3986	2658
21	6779	4067	2712
22	4894	2936	1958
23	4368	2621	1747
24	4384	2630	1754
25	4842	2905	1937
26	5000	3000	2000
27	5000	3000	2000
28	5784	3470	2314
29	7033	4220	2813
30	4494	2696	1798
31	5354	3212	2142
32	6067	3640	2427
33	5653	3392	2261
34	4750	2850	1900
35	4616	2770	1846
36	3861	2317	1544
37	4000	2400	1600
58	3800	2280	1520
59	3670	2202	1468
60	5738	3443	2295
61	3987	2392	1595
62	3988	2393	1595
63	3990	2394	1596
64	3991	2395	1596
65	3993	2396	1597
66	3994	2396	1598
67	3996	2398	1598
Total	233621	140173	93448

South Basin Lots			
Lot #	Area (SF)	Imp. (SF)	Pervious (SF)
38	4000	2400	1600
39	4000	2400	1600
40	4000	2400	1600
41	4000	2400	1600
42	4039	2423	1616
43	5118	3071	2047
44	4052	2431	1621
45	4052	2431	1621
46	4530	2718	1812
47	5095	3057	2038
48	4969	2981	1988
49	4000	2400	1600
50	4000	2400	1600
51	4000	2400	1600
52	4875	2925	1950
53	3800	2280	1520
54	3800	2280	1520
55	3800	2280	1520
56	3800	2280	1520
57	3800	2280	1520
68	3997	2398	1599
69	3999	2399	1600
70	4000	2400	1600
71	4002	2401	1601
72	4003	2402	1601
73	4007	2404	1603
74	4665	2799	1866
75	5321	3193	2128
76	9013	5408	3605
77	6969	4181	2788
78	4784	2870	1914
79	3905	2343	1562
80	3862	2317	1545
81	4179	2507	1672
82	4780	2868	1912
83	4858	2915	1943
84	4858	2915	1943
85	4858	2915	1943
86	4828	2897	1931
87	3999	2399	1600
88	4000	2400	1600
89	4000	2400	1600
Total	186617	111970	74647

Developed North Basin			
North Basin	Area (SF)	Imp. (SF)	Pervious (SF)
Tract 987	3917	3917	0
Tract 988	7041	6885	156
Tract 989	7134	0	7134
Tract 990	26913	2000	24913
Tract 991	29608	0	29608
Tract 992	9572	0	9572
Tract 993	29608	0	29608
Tract 994	4191	4191	0
Tract 995	9572	0	9572
Tract 998	1999	0	1999
ROW	70648	63583	7065
Lots	233621	140173	93448
Total	433824	220749	213075

Developed South Basin			
Basin ID	Area (SF)	Imp. (SF)	Pervious (SF)
Tract 996	30366	0	4043
Tract 997	7810	0	7810
Tract 999	2892	0	2892
ROW	71855	64670	7186
Lots	186617	111970	74647
BMP T5.16 Credit		-1380	
Total	299540	175260	96577

WWHM2012

PROJECT REPORT

General Model Information

Project Name:	Garibaldi_Combined_210830
Site Name:	Garibaldi
Site Address:	
City:	Monroe, WA
Report Date:	8/31/2021
Gage:	Everett
Data Start:	1948/10/01
Data End:	2009/09/30
Timestep:	15 Minute
Precip Scale:	1.200
Version Date:	2019/09/13
Version:	4.2.17

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	50 Year
Low Flow Threshold for POC2:	50 Percent of the 2 Year
High Flow Threshold for POC2:	50 Year

Landuse Basin Data
Predeveloped Land Use

Predev-S

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
C, Forest, Mod	4.796
C, Forest, Steep	2
Pervious Total	6.796
Impervious Land Use	acre
Impervious Total	0
Basin Total	6.796

Element Flows To:

Surface	Interflow	Groundwater

Predev-N

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
C, Forest, Mod	9.781
Pervious Total	9.781
Impervious Land Use	acre
Impervious Total	0
Basin Total	9.781

Element Flows To:

Surface	Interflow	Groundwater

Predev-Upstream

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C, Pasture, Mod	9
Pervious Total	9

Impervious Land Use	acre
ROADS MOD	1.89
Impervious Total	1.89
Basin Total	10.89

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Dev-S

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C, Pasture, Mod	0.717
C, Pasture, Flat	1.5
Pervious Total	2.217

Impervious Land Use	acre
ROADS MOD	2.023
ROOF TOPS FLAT	2
Impervious Total	4.023
Basin Total	6.24

Element Flows To:

Surface	Interflow	Groundwater
Vault-S	Vault-S	

Bypass-S

Bypass:	Yes
GroundWater:	No

Pervious Land Use	acre
C, Pasture, Steep	0.13
C, Pasture, Flat	0.413
Pervious Total	0.543

Impervious Land Use	acre
ROADS FLAT	0.315
ROADS MOD	0.088
Impervious Total	0.403
Basin Total	0.946

Element Flows To:

Surface	Interflow	Groundwater

Dev-N

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C, Pasture, Mod	3.153
Pervious Total	3.153

Impervious Land Use	acre
ROADS MOD	5.856
Impervious Total	5.856
Basin Total	9.009

Element Flows To:

Surface	Interflow	Groundwater
Vault-N	Vault-N	

Upstream-N

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C, Pasture, Mod	9
Pervious Total	9

Impervious Land Use	acre
ROADS MOD	1.89
Impervious Total	1.89
Basin Total	10.89

Element Flows To:

Surface	Interflow	Groundwater
Vault-N	Vault-N	

Bypass-N

Bypass:	Yes
GroundWater:	No

Pervious Land Use	acre
C, Pasture, Mod	0.043
Pervious Total	0.043

Impervious Land Use	acre
ROADS MOD	0.101
Impervious Total	0.101
Basin Total	0.144

Element Flows To:

Surface	Interflow	Groundwater

Routing Elements
Predeveloped Routing

Mitigated Routing

Vault-S

Width: 66 ft.
Length: 128 ft.
Depth: 13.5 ft.
Discharge Structure
Riser Height: 12.5 ft.
Riser Diameter: 24 in.
Orifice 1 Diameter: 1.333 in. Elevation:0 ft.
Orifice 2 Diameter: 1.25 in. Elevation:6 ft.
Orifice 3 Diameter: 1 in. Elevation:10 ft.
Element Flows To:
Outlet 1 Outlet 2

Vault Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.193	0.000	0.000	0.000
0.1500	0.193	0.029	0.018	0.000
0.3000	0.193	0.058	0.026	0.000
0.4500	0.193	0.087	0.032	0.000
0.6000	0.193	0.116	0.037	0.000
0.7500	0.193	0.145	0.041	0.000
0.9000	0.193	0.174	0.045	0.000
1.0500	0.193	0.203	0.049	0.000
1.2000	0.193	0.232	0.052	0.000
1.3500	0.193	0.261	0.056	0.000
1.5000	0.193	0.290	0.059	0.000
1.6500	0.193	0.320	0.061	0.000
1.8000	0.193	0.349	0.064	0.000
1.9500	0.193	0.378	0.067	0.000
2.1000	0.193	0.407	0.069	0.000
2.2500	0.193	0.436	0.072	0.000
2.4000	0.193	0.465	0.074	0.000
2.5500	0.193	0.494	0.077	0.000
2.7000	0.193	0.523	0.079	0.000
2.8500	0.193	0.552	0.081	0.000
3.0000	0.193	0.581	0.083	0.000
3.1500	0.193	0.610	0.085	0.000
3.3000	0.193	0.640	0.087	0.000
3.4500	0.193	0.669	0.089	0.000
3.6000	0.193	0.698	0.091	0.000
3.7500	0.193	0.727	0.093	0.000
3.9000	0.193	0.756	0.095	0.000
4.0500	0.193	0.785	0.097	0.000
4.2000	0.193	0.814	0.098	0.000
4.3500	0.193	0.843	0.100	0.000
4.5000	0.193	0.872	0.102	0.000
4.6500	0.193	0.901	0.104	0.000
4.8000	0.193	0.930	0.105	0.000
4.9500	0.193	0.960	0.107	0.000
5.1000	0.193	0.989	0.108	0.000
5.2500	0.193	1.018	0.110	0.000
5.4000	0.193	1.047	0.112	0.000
5.5500	0.193	1.076	0.113	0.000

5.7000	0.193	1.105	0.115	0.000
5.8500	0.193	1.134	0.116	0.000
6.0000	0.193	1.163	0.118	0.000
6.1500	0.193	1.192	0.136	0.000
6.3000	0.193	1.221	0.144	0.000
6.4500	0.193	1.250	0.150	0.000
6.6000	0.193	1.280	0.156	0.000
6.7500	0.193	1.309	0.162	0.000
6.9000	0.193	1.338	0.166	0.000
7.0500	0.193	1.367	0.171	0.000
7.2000	0.193	1.396	0.175	0.000
7.3500	0.193	1.425	0.180	0.000
7.5000	0.193	1.454	0.184	0.000
7.6500	0.193	1.483	0.187	0.000
7.8000	0.193	1.512	0.191	0.000
7.9500	0.193	1.541	0.195	0.000
8.1000	0.193	1.570	0.198	0.000
8.2500	0.193	1.600	0.202	0.000
8.4000	0.193	1.629	0.205	0.000
8.5500	0.193	1.658	0.208	0.000
8.7000	0.193	1.687	0.211	0.000
8.8500	0.193	1.716	0.215	0.000
9.0000	0.193	1.745	0.218	0.000
9.1500	0.193	1.774	0.221	0.000
9.3000	0.193	1.803	0.224	0.000
9.4500	0.193	1.832	0.227	0.000
9.6000	0.193	1.861	0.229	0.000
9.7500	0.193	1.890	0.232	0.000
9.9000	0.193	1.920	0.235	0.000
10.050	0.193	1.949	0.244	0.000
10.200	0.193	1.978	0.253	0.000
10.350	0.193	2.007	0.259	0.000
10.500	0.193	2.036	0.265	0.000
10.650	0.193	2.065	0.270	0.000
10.800	0.193	2.094	0.275	0.000
10.950	0.193	2.123	0.280	0.000
11.100	0.193	2.152	0.284	0.000
11.250	0.193	2.181	0.289	0.000
11.400	0.193	2.210	0.293	0.000
11.550	0.193	2.240	0.297	0.000
11.700	0.193	2.269	0.301	0.000
11.850	0.193	2.298	0.305	0.000
12.000	0.193	2.327	0.309	0.000
12.150	0.193	2.356	0.313	0.000
12.300	0.193	2.385	0.316	0.000
12.450	0.193	2.414	0.320	0.000
12.600	0.193	2.443	0.994	0.000
12.750	0.193	2.472	2.950	0.000
12.900	0.193	2.501	5.465	0.000
13.050	0.193	2.530	8.068	0.000
13.200	0.193	2.560	10.30	0.000
13.350	0.193	2.589	11.86	0.000
13.500	0.193	2.618	12.94	0.000
13.650	0.193	2.549	13.85	0.000

Vault-N

Width: 90 ft.
Length: 84 ft.
Depth: 13.5 ft.
Discharge Structure
Riser Height: 12.5 ft.
Riser Diameter: 24 in.
Orifice 1 Diameter: 3.875 in. Elevation:0 ft.
Orifice 2 Diameter: 2.25 in. Elevation:8.7 ft.
Orifice 3 Diameter: 2.5 in. Elevation:9.7 ft.
Element Flows To:
Outlet 1 Outlet 2

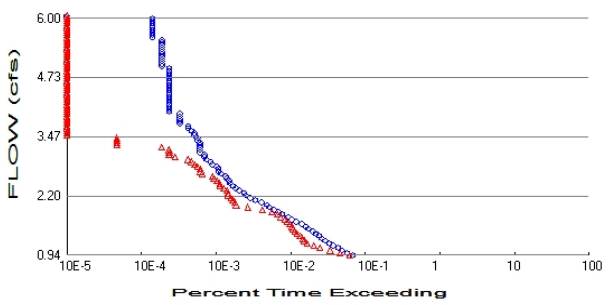
Vault Hydraulic Table

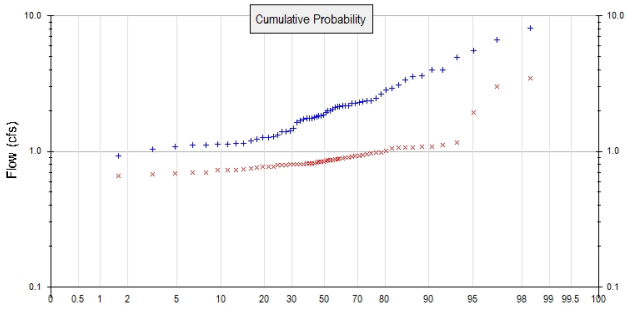
Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.173	0.000	0.000	0.000
0.1500	0.173	0.026	0.157	0.000
0.3000	0.173	0.052	0.223	0.000
0.4500	0.173	0.078	0.273	0.000
0.6000	0.173	0.104	0.315	0.000
0.7500	0.173	0.130	0.352	0.000
0.9000	0.173	0.156	0.386	0.000
1.0500	0.173	0.182	0.417	0.000
1.2000	0.173	0.208	0.446	0.000
1.3500	0.173	0.234	0.473	0.000
1.5000	0.173	0.260	0.499	0.000
1.6500	0.173	0.286	0.523	0.000
1.8000	0.173	0.312	0.546	0.000
1.9500	0.173	0.338	0.569	0.000
2.1000	0.173	0.364	0.590	0.000
2.2500	0.173	0.390	0.611	0.000
2.4000	0.173	0.416	0.631	0.000
2.5500	0.173	0.442	0.650	0.000
2.7000	0.173	0.468	0.669	0.000
2.8500	0.173	0.494	0.687	0.000
3.0000	0.173	0.520	0.705	0.000
3.1500	0.173	0.546	0.723	0.000
3.3000	0.173	0.572	0.740	0.000
3.4500	0.173	0.598	0.756	0.000
3.6000	0.173	0.624	0.773	0.000
3.7500	0.173	0.650	0.789	0.000
3.9000	0.173	0.676	0.804	0.000
4.0500	0.173	0.702	0.820	0.000
4.2000	0.173	0.728	0.835	0.000
4.3500	0.173	0.755	0.849	0.000
4.5000	0.173	0.781	0.864	0.000
4.6500	0.173	0.807	0.878	0.000
4.8000	0.173	0.833	0.892	0.000
4.9500	0.173	0.859	0.906	0.000
5.1000	0.173	0.885	0.920	0.000
5.2500	0.173	0.911	0.933	0.000
5.4000	0.173	0.937	0.946	0.000
5.5500	0.173	0.963	0.960	0.000
5.7000	0.173	0.989	0.972	0.000
5.8500	0.173	1.015	0.985	0.000

6.0000	0.173	1.041	0.998	0.000
6.1500	0.173	1.067	1.010	0.000
6.3000	0.173	1.093	1.022	0.000
6.4500	0.173	1.119	1.034	0.000
6.6000	0.173	1.145	1.046	0.000
6.7500	0.173	1.171	1.058	0.000
6.9000	0.173	1.197	1.070	0.000
7.0500	0.173	1.223	1.081	0.000
7.2000	0.173	1.249	1.093	0.000
7.3500	0.173	1.275	1.104	0.000
7.5000	0.173	1.301	1.115	0.000
7.6500	0.173	1.327	1.127	0.000
7.8000	0.173	1.353	1.138	0.000
7.9500	0.173	1.379	1.148	0.000
8.1000	0.173	1.405	1.159	0.000
8.2500	0.173	1.431	1.170	0.000
8.4000	0.173	1.457	1.181	0.000
8.5500	0.173	1.483	1.191	0.000
8.7000	0.173	1.509	1.201	0.000
8.8500	0.173	1.536	1.265	0.000
9.0000	0.173	1.562	1.297	0.000
9.1500	0.173	1.588	1.324	0.000
9.3000	0.173	1.614	1.349	0.000
9.4500	0.173	1.640	1.371	0.000
9.6000	0.173	1.666	1.392	0.000
9.7500	0.173	1.692	1.451	0.000
9.9000	0.173	1.718	1.508	0.000
10.050	0.173	1.744	1.551	0.000
10.200	0.173	1.770	1.589	0.000
10.350	0.173	1.796	1.624	0.000
10.500	0.173	1.822	1.656	0.000
10.650	0.173	1.848	1.686	0.000
10.800	0.173	1.874	1.716	0.000
10.950	0.173	1.900	1.744	0.000
11.100	0.173	1.926	1.771	0.000
11.250	0.173	1.952	1.797	0.000
11.400	0.173	1.978	1.822	0.000
11.550	0.173	2.004	1.847	0.000
11.700	0.173	2.030	1.871	0.000
11.850	0.173	2.056	1.895	0.000
12.000	0.173	2.082	1.918	0.000
12.150	0.173	2.108	1.941	0.000
12.300	0.173	2.134	1.963	0.000
12.450	0.173	2.160	1.985	0.000
12.600	0.173	2.186	2.676	0.000
12.750	0.173	2.212	4.650	0.000
12.900	0.173	2.238	7.183	0.000
13.050	0.173	2.264	9.803	0.000
13.200	0.173	2.290	12.05	0.000
13.350	0.173	2.316	13.63	0.000
13.500	0.173	2.343	14.72	0.000
13.650	0.229	3.017	15.65	0.000

Analysis Results

POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 18.781
Total Impervious Area: 1.89

Mitigated Landuse Totals for POC #1
Total Pervious Area: 12.196
Total Impervious Area: 7.847

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	1.874363
5 year	2.890012
10 year	3.711169
25 year	4.936075
50 year	5.996576
100 year	7.194398

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0.865891
5 year	1.132829
10 year	1.334725
25 year	1.619717
50 year	1.85479
100 year	2.110352

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	**Predeveloped**	**Mitigated**
1949	2.468	0.804
1950	2.355	0.889
1951	1.637	0.827
1952	1.745	0.730
1953	1.998	0.696
1954	5.559	0.805
1955	2.269	0.986
1956	1.469	0.925
1957	2.261	1.001
1958	4.929	0.959

1959	1.763	0.861
1960	2.171	0.949
1961	8.055	1.071
1962	1.923	0.873
1963	3.086	0.915
1964	2.107	0.840
1965	1.108	0.793
1966	1.125	0.672
1967	2.157	0.906
1968	1.800	1.060
1969	6.677	0.788
1970	1.288	0.701
1971	2.140	0.854
1972	2.371	0.942
1973	1.827	0.729
1974	3.347	0.772
1975	2.142	0.743
1976	1.259	0.880
1977	1.124	0.770
1978	1.145	0.682
1979	3.583	1.057
1980	2.041	0.816
1981	1.225	0.769
1982	1.408	1.077
1983	2.632	0.808
1984	1.673	0.928
1985	1.751	0.975
1986	3.963	1.946
1987	1.771	1.118
1988	1.724	0.818
1989	1.826	0.661
1990	1.393	0.839
1991	1.398	0.864
1992	1.845	0.734
1993	1.328	0.753
1994	1.089	0.813
1995	1.191	0.874
1996	2.336	1.080
1997	4.001	3.444
1998	1.994	0.797
1999	1.036	0.794
2000	2.845	0.802
2001	0.758	0.623
2002	0.919	0.840
2003	1.144	0.732
2004	2.306	1.072
2005	1.108	0.899
2006	3.626	1.164
2007	2.933	0.861
2008	2.167	3.019
2009	1.271	0.815

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	8.0551	3.4442
2	6.6769	3.0194
3	5.5595	1.9464

4	4.9288	1.1645
5	4.0010	1.1176
6	3.9631	1.0800
7	3.6260	1.0774
8	3.5833	1.0723
9	3.3467	1.0706
10	3.0857	1.0604
11	2.9329	1.0570
12	2.8446	1.0015
13	2.6323	0.9861
14	2.4683	0.9748
15	2.3706	0.9594
16	2.3550	0.9486
17	2.3356	0.9417
18	2.3061	0.9277
19	2.2692	0.9249
20	2.2609	0.9149
21	2.1714	0.9056
22	2.1667	0.8994
23	2.1571	0.8889
24	2.1420	0.8804
25	2.1402	0.8743
26	2.1066	0.8726
27	2.0412	0.8637
28	1.9979	0.8610
29	1.9944	0.8606
30	1.9225	0.8536
31	1.8451	0.8403
32	1.8273	0.8397
33	1.8260	0.8394
34	1.7996	0.8269
35	1.7712	0.8181
36	1.7628	0.8163
37	1.7512	0.8147
38	1.7451	0.8135
39	1.7238	0.8078
40	1.6731	0.8048
41	1.6366	0.8037
42	1.4693	0.8023
43	1.4080	0.7975
44	1.3983	0.7940
45	1.3934	0.7932
46	1.3277	0.7880
47	1.2885	0.7717
48	1.2714	0.7699
49	1.2592	0.7688
50	1.2249	0.7531
51	1.1911	0.7429
52	1.1447	0.7336
53	1.1438	0.7316
54	1.1246	0.7298
55	1.1238	0.7290
56	1.1081	0.7008
57	1.1076	0.6959
58	1.0890	0.6825
59	1.0363	0.6724
60	0.9194	0.6613
61	0.7581	0.6234

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.9372	1439	1316	91	Pass
0.9883	1214	980	80	Pass
1.0394	1050	724	68	Pass
1.0905	920	527	57	Pass
1.1416	799	437	54	Pass
1.1927	698	353	50	Pass
1.2438	626	323	51	Pass
1.2949	562	310	55	Pass
1.3460	511	284	55	Pass
1.3971	462	260	56	Pass
1.4482	420	244	58	Pass
1.4993	373	233	62	Pass
1.5504	338	221	65	Pass
1.6015	300	206	68	Pass
1.6527	255	191	74	Pass
1.7038	222	177	79	Pass
1.7549	200	156	78	Pass
1.8060	165	141	85	Pass
1.8571	146	119	81	Pass
1.9082	128	89	69	Pass
1.9593	111	57	51	Pass
2.0104	104	40	38	Pass
2.0615	86	38	44	Pass
2.1126	72	36	50	Pass
2.1637	62	34	54	Pass
2.2148	53	31	58	Pass
2.2659	51	31	60	Pass
2.3170	43	30	69	Pass
2.3681	39	27	69	Pass
2.4192	36	24	66	Pass
2.4703	33	24	72	Pass
2.5214	32	22	68	Pass
2.5725	30	20	66	Pass
2.6236	29	19	65	Pass
2.6748	25	14	56	Pass
2.7259	23	13	56	Pass
2.7770	23	13	56	Pass
2.8281	22	12	54	Pass
2.8792	19	11	57	Pass
2.9303	18	10	55	Pass
2.9814	16	9	56	Pass
3.0325	15	6	40	Pass
3.0836	15	5	33	Pass
3.1347	13	5	38	Pass
3.1858	13	5	38	Pass
3.2369	13	4	30	Pass
3.2880	13	1	7	Pass
3.3391	13	1	7	Pass
3.3902	12	1	8	Pass
3.4413	12	1	8	Pass
3.4924	11	0	0	Pass
3.5435	11	0	0	Pass
3.5946	10	0	0	Pass

3.6457	9	0	0	Pass
3.6969	9	0	0	Pass
3.7480	7	0	0	Pass
3.7991	7	0	0	Pass
3.8502	7	0	0	Pass
3.9013	7	0	0	Pass
3.9524	7	0	0	Pass
4.0035	5	0	0	Pass
4.0546	5	0	0	Pass
4.1057	5	0	0	Pass
4.1568	5	0	0	Pass
4.2079	5	0	0	Pass
4.2590	5	0	0	Pass
4.3101	5	0	0	Pass
4.3612	5	0	0	Pass
4.4123	5	0	0	Pass
4.4634	5	0	0	Pass
4.5145	5	0	0	Pass
4.5656	5	0	0	Pass
4.6167	5	0	0	Pass
4.6678	5	0	0	Pass
4.7190	5	0	0	Pass
4.7701	5	0	0	Pass
4.8212	5	0	0	Pass
4.8723	5	0	0	Pass
4.9234	5	0	0	Pass
4.9745	4	0	0	Pass
5.0256	4	0	0	Pass
5.0767	4	0	0	Pass
5.1278	4	0	0	Pass
5.1789	4	0	0	Pass
5.2300	4	0	0	Pass
5.2811	4	0	0	Pass
5.3322	4	0	0	Pass
5.3833	4	0	0	Pass
5.4344	4	0	0	Pass
5.4855	4	0	0	Pass
5.5366	4	0	0	Pass
5.5877	3	0	0	Pass
5.6388	3	0	0	Pass
5.6899	3	0	0	Pass
5.7411	3	0	0	Pass
5.7922	3	0	0	Pass
5.8433	3	0	0	Pass
5.8944	3	0	0	Pass
5.9455	3	0	0	Pass
5.9966	3	0	0	Pass

Water Quality

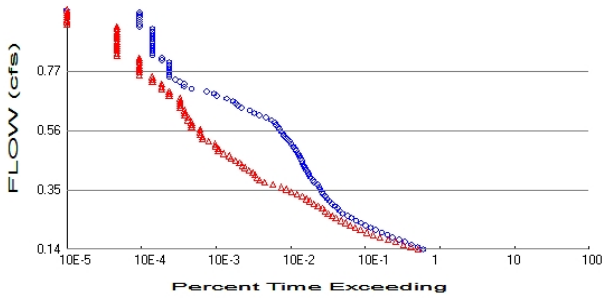
Water Quality BMP Flow and Volume for POC #1

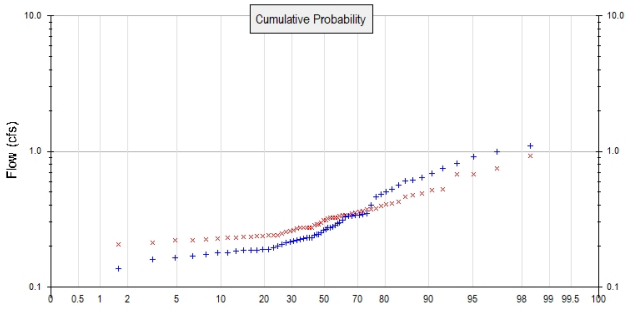
On-line facility volume:	0 acre-feet
On-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.
Off-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.

LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Vault-N POC	☐	2221.14			☐	0.00			
Total Volume Infiltrated		2221.14	0.00	0.00		0.00	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Failed

POC 2





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #2
Total Pervious Area: 6.796
Total Impervious Area: 0

Mitigated Landuse Totals for POC #2
Total Pervious Area: 2.76
Total Impervious Area: 4.426

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #2

Return Period	**Flow(cfs)**
2 year	0.284323
5 year	0.457415
10 year	0.595772
25 year	0.799355
50 year	0.973056
100 year	1.16664

Flow Frequency Return Periods for Mitigated. POC #2

Return Period	**Flow(cfs)**
2 year	0.307441
5 year	0.415489
10 year	0.497688
25 year	0.614408
50 year	0.711226
100 year	0.81697

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #2

Year	**Predeveloped**	**Mitigated**
1949	0.309	0.337
1950	0.330	0.353
1951	0.260	0.312
1952	0.224	0.289
1953	0.185	0.334
1954	1.091	0.515
1955	0.344	0.337
1956	0.294	0.258
1957	0.402	0.337
1958	0.610	0.675
1959	0.266	0.254

1960	0.272	0.285
1961	0.813	0.931
1962	0.277	0.297
1963	0.462	0.397
1964	0.347	0.222
1965	0.215	0.225
1966	0.137	0.231
1967	0.275	0.485
1968	0.337	0.311
1969	0.992	0.674
1970	0.184	0.249
1971	0.340	0.326
1972	0.221	0.423
1973	0.205	0.324
1974	0.563	0.374
1975	0.229	0.325
1976	0.217	0.270
1977	0.165	0.239
1978	0.194	0.229
1979	0.608	0.408
1980	0.285	0.271
1981	0.190	0.233
1982	0.253	0.261
1983	0.501	0.321
1984	0.245	0.275
1985	0.332	0.346
1986	0.743	0.461
1987	0.332	0.362
1988	0.178	0.275
1989	0.229	0.290
1990	0.230	0.238
1991	0.241	0.242
1992	0.188	0.273
1993	0.186	0.222
1994	0.170	0.238
1995	0.244	0.233
1996	0.484	0.326
1997	0.916	0.752
1998	0.160	0.357
1999	0.200	0.204
2000	0.174	0.522
2001	0.064	0.211
2002	0.228	0.200
2003	0.179	0.239
2004	0.298	0.477
2005	0.213	0.229
2006	0.689	0.414
2007	0.525	0.373
2008	0.637	0.379
2009	0.185	0.273

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #2

Rank	Predeveloped	Mitigated
1	1.0910	0.9305
2	0.9917	0.7521
3	0.9164	0.6749
4	0.8131	0.6744

5	0.7431	0.5222
6	0.6892	0.5146
7	0.6366	0.4854
8	0.6104	0.4771
9	0.6078	0.4614
10	0.5633	0.4232
11	0.5252	0.4144
12	0.5015	0.4075
13	0.4840	0.3975
14	0.4621	0.3792
15	0.4019	0.3745
16	0.3475	0.3727
17	0.3438	0.3621
18	0.3396	0.3571
19	0.3370	0.3534
20	0.3318	0.3455
21	0.3317	0.3368
22	0.3301	0.3366
23	0.3086	0.3365
24	0.2980	0.3335
25	0.2935	0.3261
26	0.2854	0.3258
27	0.2771	0.3252
28	0.2745	0.3241
29	0.2717	0.3209
30	0.2655	0.3120
31	0.2600	0.3114
32	0.2526	0.2967
33	0.2445	0.2900
34	0.2443	0.2887
35	0.2409	0.2853
36	0.2300	0.2751
37	0.2293	0.2749
38	0.2288	0.2731
39	0.2281	0.2729
40	0.2241	0.2713
41	0.2212	0.2701
42	0.2169	0.2607
43	0.2151	0.2584
44	0.2127	0.2536
45	0.2054	0.2490
46	0.1995	0.2417
47	0.1939	0.2393
48	0.1902	0.2389
49	0.1877	0.2383
50	0.1860	0.2380
51	0.1854	0.2335
52	0.1853	0.2327
53	0.1837	0.2308
54	0.1793	0.2295
55	0.1783	0.2287
56	0.1738	0.2246
57	0.1695	0.2221
58	0.1645	0.2219
59	0.1603	0.2114
60	0.1372	0.2044
61	0.0637	0.2001

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.1422	12793	10878	85	Pass
0.1506	10701	8699	81	Pass
0.1589	8893	6926	77	Pass
0.1673	7208	5426	75	Pass
0.1757	6055	4299	70	Pass
0.1841	4937	3335	67	Pass
0.1925	4205	2727	64	Pass
0.2009	3544	2235	63	Pass
0.2093	2913	1831	62	Pass
0.2177	2509	1569	62	Pass
0.2261	2136	1341	62	Pass
0.2345	1862	1157	62	Pass
0.2429	1608	1009	62	Pass
0.2513	1397	864	61	Pass
0.2597	1234	769	62	Pass
0.2681	1061	677	63	Pass
0.2764	973	614	63	Pass
0.2848	899	568	63	Pass
0.2932	828	495	59	Pass
0.3016	766	438	57	Pass
0.3100	708	384	54	Pass
0.3184	661	348	52	Pass
0.3268	616	304	49	Pass
0.3352	578	261	45	Pass
0.3436	558	218	39	Pass
0.3520	534	189	35	Pass
0.3604	512	160	31	Pass
0.3688	487	123	25	Pass
0.3772	438	95	21	Pass
0.3856	420	81	19	Pass
0.3939	397	75	18	Pass
0.4023	378	71	18	Pass
0.4107	362	66	18	Pass
0.4191	341	59	17	Pass
0.4275	333	52	15	Pass
0.4359	320	48	15	Pass
0.4443	307	44	14	Pass
0.4527	297	39	13	Pass
0.4611	290	34	11	Pass
0.4695	282	32	11	Pass
0.4779	268	27	10	Pass
0.4863	255	23	9	Pass
0.4947	245	23	9	Pass
0.5031	232	21	9	Pass
0.5114	217	21	9	Pass
0.5198	207	17	8	Pass
0.5282	191	14	7	Pass
0.5366	180	14	7	Pass
0.5450	169	13	7	Pass
0.5534	160	13	8	Pass
0.5618	152	13	8	Pass
0.5702	144	10	6	Pass
0.5786	136	10	7	Pass

0.5870	130	10	7	Pass
0.5954	119	9	7	Pass
0.6038	100	9	9	Pass
0.6122	81	8	9	Pass
0.6206	69	8	11	Pass
0.6289	60	8	13	Pass
0.6373	47	7	14	Pass
0.6457	42	7	16	Pass
0.6541	39	7	17	Pass
0.6625	36	7	19	Pass
0.6709	30	7	23	Pass
0.6793	22	5	22	Pass
0.6877	20	5	25	Pass
0.6961	16	5	31	Pass
0.7045	10	4	40	Pass
0.7129	8	4	50	Pass
0.7213	8	4	50	Pass
0.7297	7	3	42	Pass
0.7381	6	3	50	Pass
0.7464	5	3	60	Pass
0.7548	5	2	40	Pass
0.7632	5	2	40	Pass
0.7716	5	2	40	Pass
0.7800	5	2	40	Pass
0.7884	5	2	40	Pass
0.7968	5	2	40	Pass
0.8052	4	2	50	Pass
0.8136	4	2	50	Pass
0.8220	3	1	33	Pass
0.8304	3	1	33	Pass
0.8388	3	1	33	Pass
0.8472	3	1	33	Pass
0.8556	3	1	33	Pass
0.8639	3	1	33	Pass
0.8723	3	1	33	Pass
0.8807	3	1	33	Pass
0.8891	3	1	33	Pass
0.8975	3	1	33	Pass
0.9059	3	1	33	Pass
0.9143	3	1	33	Pass
0.9227	2	1	50	Pass
0.9311	2	0	0	Pass
0.9395	2	0	0	Pass
0.9479	2	0	0	Pass
0.9563	2	0	0	Pass
0.9647	2	0	0	Pass
0.9731	2	0	0	Pass

Water Quality

Water Quality BMP Flow and Volume for POC #2

On-line facility volume:	0 acre-feet
On-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.
Off-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.

LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Vault-S POC	☐	867.02			☐	0.00			
Total Volume Infiltrated		867.02	0.00	0.00		0.00	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Failed

Model Default Modifications

Total of 0 changes have been made.

PERLND Changes

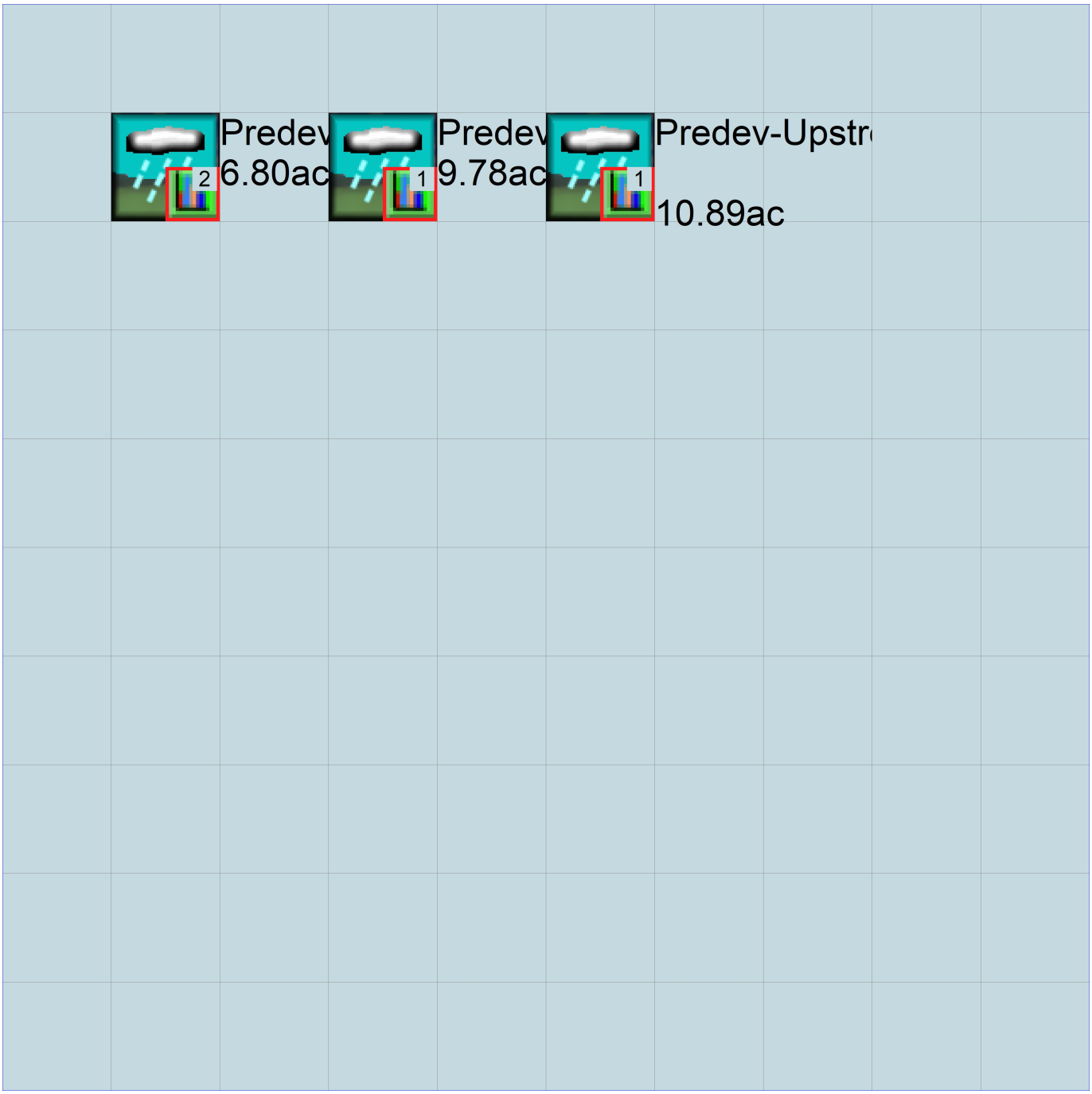
No PERLND changes have been made.

IMPLND Changes

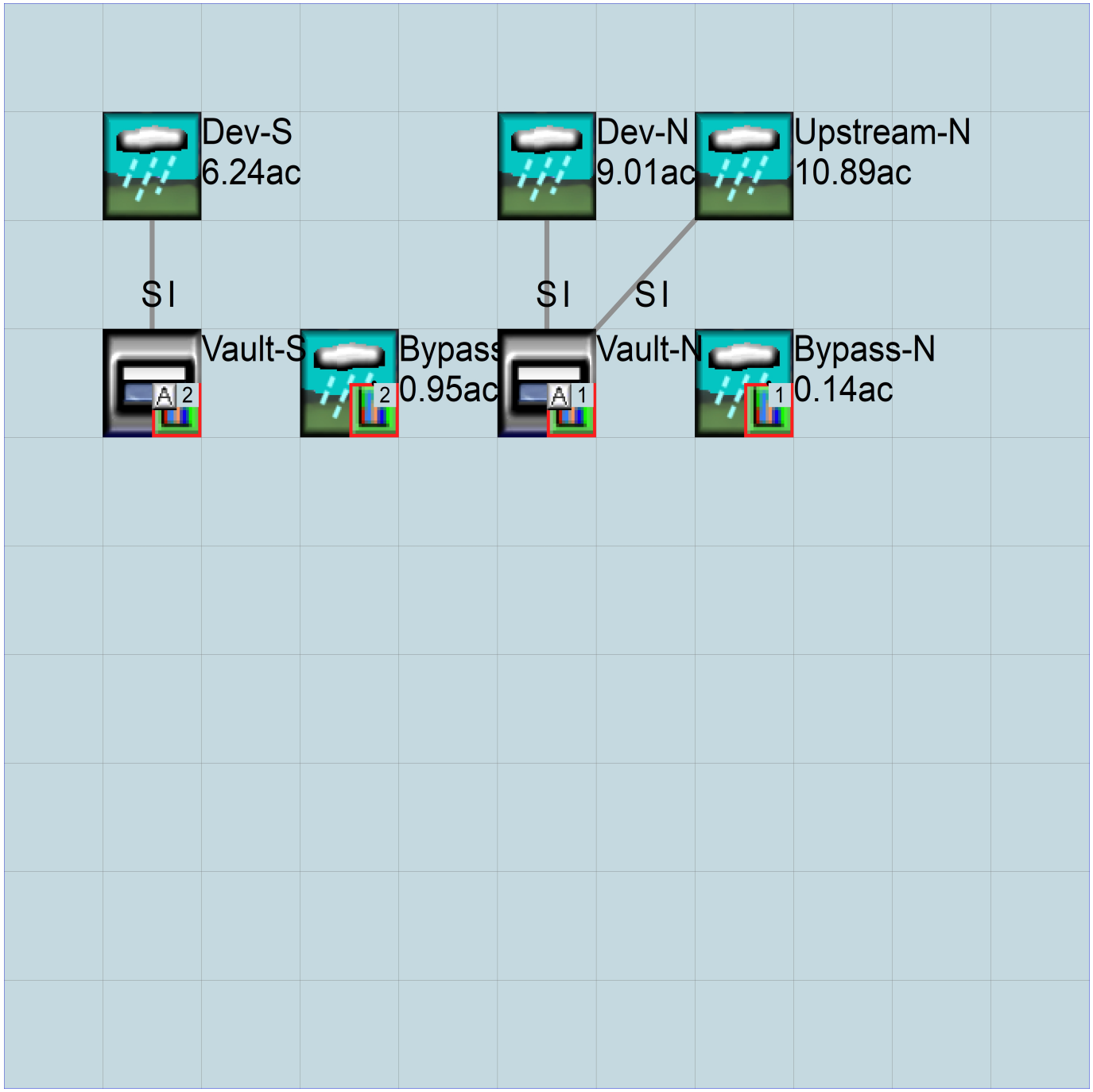
No IMPLND changes have been made.

Appendix

Predeveloped Schematic



Mitigated Schematic



Predeveloped UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1948 10 01        END    2009 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                    UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   Garibaldi_Combined_210830.wdm
MESSU       25   PreGaribaldi_Combined_210830.MES
            27   PreGaribaldi_Combined_210830.L61
            28   PreGaribaldi_Combined_210830.L62
            31   POCGaribaldi_Combined_2108302.dat
            30   POCGaribaldi_Combined_2108301.dat
END FILES

OPN SEQUENCE
    INGRP               INDELT 00:15
      PERLND      11
      PERLND      12
      PERLND      14
      IMPLND       2
      COPY       502
      COPY       501
      DISPLY       2
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title---------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    2        Predev-S                  MAX                    1    2   31    9
    1        Predev-N                  MAX                    1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  502         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                          in  out           ***
   11     C, Forest, Mod          1    1    1    1   27    0
   12     C, Forest, Steep        1    1    1    1   27    0
   14     C, Pasture, Mod         1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
```

```
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
   11         0    0    1    0    0    0    0    0    0    0    0    0
   12         0    0    1    0    0    0    0    0    0    0    0    0
   14         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
   11         0    0    4    0    0    0    0    0    0    0    0    0    1    9
   12         0    0    4    0    0    0    0    0    0    0    0    0    1    9
   14         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
   11         0    0    0    0    0    0    0    0    0    0    0
   12         0    0    0    0    0    0    0    0    0    0    0
   14         0    0    0    0    0    0    0    0    0    0    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR      KVARY      AGWRC
   11              0       4.5      0.08       400       0.1        0.5      0.996
   12              0       4.5      0.08       400      0.15        0.5      0.996
   14              0       4.5      0.06       400       0.1        0.5      0.996
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
   11              0         0         2         2         0         0         0
   12              0         0         2         2         0         0         0
   14              0         0         2         2         0         0         0
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                              ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
   11            0.2       0.5      0.35         6       0.5       0.7
   12            0.2       0.3      0.35         6       0.3       0.7
   14           0.15       0.4       0.3         6       0.5       0.4
  END PWAT-PARM4

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
             ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS       AGWS       GWVS
   11              0         0         0         0       2.5          1          0
   12              0         0         0         0       2.5          1          0
   14              0         0         0         0       2.5          1          0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                   in  out           ***
    2      ROADS/MOD              1    1    1   27    0
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
    2         0    0    1    0    0    0
  END ACTIVITY
```

```
  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
    2         0    0    4    0    0    0    1    9
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
    2         0    0    0    0    0
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
    2            400      0.05       0.1      0.08
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
    2              0         0
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
    2              0         0
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
Predev-S***
PERLND  11                       4.796     COPY   502     12
PERLND  11                       4.796     COPY   502     13
PERLND  12                          2      COPY   502     12
PERLND  12                          2      COPY   502     13
Predev-N***
PERLND  11                       9.781     COPY   501     12
PERLND  11                       9.781     COPY   501     13
Predev-Upstream***
PERLND  14                          9      COPY   501     12
PERLND  14                          9      COPY   501     13
IMPLND   2                       1.89      COPY   501     15

******Routing******
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   502 OUTPUT MEAN   1 1   48.4        DISPLY   2     INPUT  TIMSER 1
COPY   501 OUTPUT MEAN   1 1   48.4        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG           ***
                                       in  out                              ***
  END GEN-INFO
```

```
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************* Active Sections ****************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ****************** PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                    ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
           FG FG FG FG  possible  exit  *** possible  exit      possible  exit
            *  *  *  *    *  *  *  *  *       *  *  *  *  *        ***
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                       ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
         *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    1.2           PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    1.2           IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    0.76          PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    0.76          IMPLND   1 999 EXTNL  PETINP

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
COPY   502 OUTPUT MEAN   1 1     48.4      WDM    502 FLOW     ENGL      REPL
COPY   501 OUTPUT MEAN   1 1     48.4      WDM    501 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>            <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13

  MASS-LINK       15
IMPLND     IWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   15


END MASS-LINK
```

```
END RUN
```

Mitigated UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1948 10 01        END    2009 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                   UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   Garibaldi_Combined_210830.wdm
MESSU       25   MitGaribaldi_Combined_210830.MES
            27   MitGaribaldi_Combined_210830.L61
            28   MitGaribaldi_Combined_210830.L62
            31   POCGaribaldi_Combined_2108302.dat
            30   POCGaribaldi_Combined_2108301.dat
END FILES

OPN SEQUENCE
    INGRP               INDELT 00:15
      PERLND      14
      PERLND      13
      IMPLND       2
      IMPLND       4
      PERLND      15
      IMPLND       1
      RCHRES       1
      RCHRES       2
      COPY         2
      COPY       502
      COPY       602
      COPY         1
      COPY       501
      COPY       601
      DISPLY       2
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title----------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    2        Vault-S                    MAX                    1    2   31    9
    1        Vault-N                    MAX                    1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
    2         1    1
  502         1    1
  602         1    1
  501         1    1
  601         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
```

```
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                        User  t-series Engl Metr ***
                                    in  out           ***
   14     C, Pasture, Mod         1    1    1    1   27    0
   13     C, Pasture, Flat        1    1    1    1   27    0
   15     C, Pasture, Steep       1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
   14         0    0    1    0    0    0    0    0    0    0    0    0
   13         0    0    1    0    0    0    0    0    0    0    0    0
   15         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ***************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
   14         0    0    4    0    0    0    0    0    0    0    0    0    1    9
   13         0    0    4    0    0    0    0    0    0    0    0    0    1    9
   15         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
   14         0    0    0    0    0    0    0    0    0    0    0
   13         0    0    0    0    0    0    0    0    0    0    0
   15         0    0    0    0    0    0    0    0    0    0    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
   14              0       4.5      0.06       400       0.1       0.5     0.996
   13              0       4.5      0.06       400      0.05       0.5     0.996
   15              0       4.5      0.06       400      0.15       0.5     0.996
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
   14              0         0         2         2         0         0         0
   13              0         0         2         2         0         0         0
   15              0         0         2         2         0         0         0
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                          ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
   14          0.15       0.4       0.3         6       0.5       0.4
   13          0.15       0.4       0.3         6       0.5       0.4
   15          0.15      0.25       0.3         6       0.3       0.4
  END PWAT-PARM4

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS       AGWS      GWVS
   14              0         0         0         0       2.5          1         0
   13              0         0         0         0       2.5          1         0
   15              0         0         0         0       2.5          1         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
```

```
    # -  #                     User  t-series Engl Metr ***
                                    in  out           ***
    2      ROADS/MOD              1    1    1   27    0
    4      ROOF TOPS/FLAT         1    1    1   27    0
    1      ROADS/FLAT             1    1    1   27    0
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
    2         0    0    1    0    0    0
    4         0    0    1    0    0    0
    1         0    0    1    0    0    0
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
    2         0    0    4    0    0    0    1    9
    4         0    0    4    0    0    0    1    9
    1         0    0    4    0    0    0    1    9
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
    2         0    0    0    0    0
    4         0    0    0    0    0
    1         0    0    0    0    0
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
    2           400      0.05       0.1      0.08
    4           400      0.01       0.1       0.1
    1           400      0.01       0.1       0.1
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
    2             0         0
    4             0         0
    1             0         0
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
    2             0         0
    4             0         0
    1             0         0
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
Dev-S***
PERLND  14                      0.717     RCHRES   1      2
PERLND  14                      0.717     RCHRES   1      3
PERLND  13                        1.5     RCHRES   1      2
PERLND  13                        1.5     RCHRES   1      3
IMPLND   2                      2.023     RCHRES   1      5
IMPLND   4                          2     RCHRES   1      5
Dev-N***
PERLND  14                      3.153     RCHRES   2      2
```

```
PERLND  14                      3.153     RCHRES   2      3
IMPLND   2                      5.856     RCHRES   2      5
Upstream-N***
PERLND  14                         9      RCHRES   2      2
PERLND  14                         9      RCHRES   2      3
IMPLND   2                      1.89      RCHRES   2      5
Bypass-S***
PERLND  15                      0.13      COPY   502     12
PERLND  15                      0.13      COPY   602     12
PERLND  15                      0.13      COPY   502     13
PERLND  15                      0.13      COPY   602     13
PERLND  13                     0.413      COPY   502     12
PERLND  13                     0.413      COPY   602     12
PERLND  13                     0.413      COPY   502     13
PERLND  13                     0.413      COPY   602     13
IMPLND   1                     0.315      COPY   502     15
IMPLND   1                     0.315      COPY   602     15
IMPLND   2                     0.088      COPY   502     15
IMPLND   2                     0.088      COPY   602     15
Bypass-N***
PERLND  14                     0.043      COPY   501     12
PERLND  14                     0.043      COPY   601     12
PERLND  14                     0.043      COPY   501     13
PERLND  14                     0.043      COPY   601     13
IMPLND   2                     0.101      COPY   501     15
IMPLND   2                     0.101      COPY   601     15

******Routing******
PERLND  14                     0.717      COPY     2     12
PERLND  13                       1.5      COPY     2     12
IMPLND   2                     2.023      COPY     2     15
IMPLND   4                         2      COPY     2     15
PERLND  14                     0.717      COPY     2     13
PERLND  13                       1.5      COPY     2     13
PERLND  14                     3.153      COPY     1     12
IMPLND   2                     5.856      COPY     1     15
PERLND  14                     3.153      COPY     1     13
PERLND  14                         9      COPY     1     12
IMPLND   2                      1.89      COPY     1     15
PERLND  14                         9      COPY     1     13
RCHRES   1                         1      COPY   502     16
RCHRES   2                         1      COPY   501     16
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   502 OUTPUT MEAN   1 1   48.4        DISPLY   2     INPUT  TIMSER 1
COPY   501 OUTPUT MEAN   1 1   48.4        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<----------------><---> User T-series  Engl Metr LKFG             ***
                                        in  out                             ***
    1     Vault-S                1    1    1    1   28    0    1
    2     Vault-N                1    1    1    1   28    0    1
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
    1         1    0    0    0    0    0    0    0    0    0
```

```
    2         1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************* PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
    1         4    0    0    0    0    0    0    0    0    0    1    9
    2         4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                    ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
             FG FG FG FG  possible  exit  *** possible  exit      possible  exit
              *  *  *  *    *  *  *  *  *      *  *  *  *  *        ***
    1         0  1  0  0    4  0  0  0  0       0  0  0  0  0       2  2  2  2  2
    2         0  1  0  0    4  0  0  0  0       0  0  0  0  0       2  2  2  2  2
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
    1              1      0.02       0.0       0.0       0.5       0.0
    2              2      0.02       0.0       0.0       0.5       0.0
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                       ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
    1           0         4.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    2           0         4.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
  FTABLE      1
   91    4
     Depth      Area    Volume  Outflow1 Velocity  Travel Time***
      (ft)   (acres) (acre-ft)   (cfs)   (ft/sec)    (Minutes)***
  0.000000  0.193939  0.000000  0.000000
  0.150000  0.193939  0.029091  0.018675
  0.300000  0.193939  0.058182  0.026411
  0.450000  0.193939  0.087273  0.032346
  0.600000  0.193939  0.116364  0.037350
  0.750000  0.193939  0.145455  0.041759
  0.900000  0.193939  0.174545  0.045745
  1.050000  0.193939  0.203636  0.049410
  1.200000  0.193939  0.232727  0.052821
  1.350000  0.193939  0.261818  0.056026
  1.500000  0.193939  0.290909  0.059056
  1.650000  0.193939  0.320000  0.061939
  1.800000  0.193939  0.349091  0.064693
  1.950000  0.193939  0.378182  0.067334
  2.100000  0.193939  0.407273  0.069876
  2.250000  0.193939  0.436364  0.072329
  2.400000  0.193939  0.465455  0.074701
  2.550000  0.193939  0.494545  0.077000
  2.700000  0.193939  0.523636  0.079232
  2.850000  0.193939  0.552727  0.081403
  3.000000  0.193939  0.581818  0.083518
  3.150000  0.193939  0.610909  0.085580
  3.300000  0.193939  0.640000  0.087594
  3.450000  0.193939  0.669091  0.089563
  3.600000  0.193939  0.698182  0.091489
  3.750000  0.193939  0.727273  0.093376
  3.900000  0.193939  0.756364  0.095225
  4.050000  0.193939  0.785455  0.097039
```

```
4.200000  0.193939  0.814545  0.098820
4.350000  0.193939  0.843636  0.100569
4.500000  0.193939  0.872727  0.102288
4.650000  0.193939  0.901818  0.103979
4.800000  0.193939  0.930909  0.105643
4.950000  0.193939  0.960000  0.107281
5.100000  0.193939  0.989091  0.108894
5.250000  0.193939  1.018182  0.110484
5.400000  0.193939  1.047273  0.112051
5.550000  0.193939  1.076364  0.113597
5.700000  0.193939  1.105455  0.115122
5.850000  0.193939  1.134545  0.116626
6.000000  0.193939  1.163636  0.118112
6.150000  0.193939  1.192727  0.136001
6.300000  0.193939  1.221818  0.144253
6.450000  0.193939  1.250909  0.150905
6.600000  0.193939  1.280000  0.156721
6.750000  0.193939  1.309091  0.161997
6.900000  0.193939  1.338182  0.166887
7.050000  0.193939  1.367273  0.171479
7.200000  0.193939  1.396364  0.175834
7.350000  0.193939  1.425455  0.179992
7.500000  0.193939  1.454545  0.183984
7.650000  0.193939  1.483636  0.187833
7.800000  0.193939  1.512727  0.191556
7.950000  0.193939  1.541818  0.195167
8.100000  0.193939  1.570909  0.198679
8.250000  0.193939  1.600000  0.202101
8.400000  0.193939  1.629091  0.205440
8.550000  0.193939  1.658182  0.208704
8.700000  0.193939  1.687273  0.211898
8.850000  0.193939  1.716364  0.215028
9.000000  0.193939  1.745455  0.218098
9.150000  0.193939  1.774545  0.221113
9.300000  0.193939  1.803636  0.224074
9.450000  0.193939  1.832727  0.226986
9.600000  0.193939  1.861818  0.229852
9.750000  0.193939  1.890909  0.232674
9.900000  0.193939  1.920000  0.235454
10.05000  0.193939  1.949091  0.244262
10.20000  0.193939  1.978182  0.253032
10.35000  0.193939  2.007273  0.259617
10.50000  0.193939  2.036364  0.265383
10.65000  0.193939  2.065455  0.270672
10.80000  0.193939  2.094545  0.275633
10.95000  0.193939  2.123636  0.280347
11.10000  0.193939  2.152727  0.284867
11.25000  0.193939  2.181818  0.289225
11.40000  0.193939  2.210909  0.293447
11.55000  0.193939  2.240000  0.297550
11.70000  0.193939  2.269091  0.301548
11.85000  0.193939  2.298182  0.305454
12.00000  0.193939  2.327273  0.309275
12.15000  0.193939  2.356364  0.313019
12.30000  0.193939  2.385455  0.316692
12.45000  0.193939  2.414545  0.320301
12.60000  0.193939  2.443636  0.994090
12.75000  0.193939  2.472727  2.950412
12.90000  0.193939  2.501818  5.465370
13.05000  0.193939  2.530909  8.068881
13.20000  0.193939  2.560000  10.30531
13.35000  0.193939  2.589091  11.86546
13.50000  0.193939  2.618182  12.94258
END FTABLE  1
FTABLE      2
 91    4
   Depth      Area    Volume  Outflow1 Velocity  Travel Time***
    (ft)   (acres) (acre-ft)   (cfs)   (ft/sec)    (Minutes)***
0.000000  0.173554  0.000000  0.000000
0.150000  0.173554  0.026033  0.157815
```

0.300000	0.173554	0.052066	0.223184
0.450000	0.173554	0.078099	0.273343
0.600000	0.173554	0.104132	0.315630
0.750000	0.173554	0.130165	0.352885
0.900000	0.173554	0.156198	0.386566
1.050000	0.173554	0.182231	0.417539
1.200000	0.173554	0.208264	0.446368
1.350000	0.173554	0.234298	0.473444
1.500000	0.173554	0.260331	0.499054
1.650000	0.173554	0.286364	0.523413
1.800000	0.173554	0.312397	0.546687
1.950000	0.173554	0.338430	0.569009
2.100000	0.173554	0.364463	0.590489
2.250000	0.173554	0.390496	0.611214
2.400000	0.173554	0.416529	0.631259
2.550000	0.173554	0.442562	0.650687
2.700000	0.173554	0.468595	0.669552
2.850000	0.173554	0.494628	0.687899
3.000000	0.173554	0.520661	0.705769
3.150000	0.173554	0.546694	0.723198
3.300000	0.173554	0.572727	0.740217
3.450000	0.173554	0.598760	0.756853
3.600000	0.173554	0.624793	0.773132
3.750000	0.173554	0.650826	0.789074
3.900000	0.173554	0.676860	0.804701
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4.200000	0.173554	0.728926	0.835077
4.350000	0.173554	0.754959	0.849859
4.500000	0.173554	0.780992	0.864387
4.650000	0.173554	0.807025	0.878676
4.800000	0.173554	0.833058	0.892735
4.950000	0.173554	0.859091	0.906577
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5.700000	0.173554	0.989256	0.972836
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6.750000	0.173554	1.171488	1.058654
6.900000	0.173554	1.197521	1.070352
7.050000	0.173554	1.223554	1.081924
7.200000	0.173554	1.249587	1.093373
7.350000	0.173554	1.275620	1.104704
7.500000	0.173554	1.301653	1.115919
7.650000	0.173554	1.327686	1.127023
7.800000	0.173554	1.353719	1.138019
7.950000	0.173554	1.379752	1.148909
8.100000	0.173554	1.405785	1.159697
8.250000	0.173554	1.431818	1.170386
8.400000	0.173554	1.457851	1.180978
8.550000	0.173554	1.483884	1.191476
8.700000	0.173554	1.509917	1.201882
8.850000	0.173554	1.535950	1.265406
9.000000	0.173554	1.561983	1.297674
9.150000	0.173554	1.588017	1.324730
9.300000	0.173554	1.614050	1.349049
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9.600000	0.173554	1.666116	1.392849
9.750000	0.173554	1.692149	1.451041
9.900000	0.173554	1.718182	1.508436
10.05000	0.173554	1.744215	1.551731
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10.50000	0.173554	1.822314	1.656388
10.65000	0.173554	1.848347	1.686923

```
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  10.95000  0.173554  1.900413  1.744065
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  11.40000  0.173554  1.978512  1.822674
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  11.70000  0.173554  2.030579  1.871590
  11.85000  0.173554  2.056612  1.895204
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  12.15000  0.173554  2.108678  1.940979
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  12.90000  0.173554  2.238843  7.183050
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  13.20000  0.173554  2.290909  12.05697
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  13.50000  0.173554  2.342975  14.72729
  END FTABLE  2
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    1.2             PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    1.2             IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    0.76            PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    0.76            IMPLND   1 999 EXTNL  PETINP

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
COPY     2 OUTPUT MEAN   1 1     48.4      WDM    702 FLOW     ENGL      REPL
COPY   502 OUTPUT MEAN   1 1     48.4      WDM    802 FLOW     ENGL      REPL
COPY   602 OUTPUT MEAN   1 1     48.4      WDM    902 FLOW     ENGL      REPL
RCHRES   1 HYDR   RO     1 1        1      WDM   1000 FLOW     ENGL      REPL
RCHRES   1 HYDR   STAGE  1 1        1      WDM   1001 STAG     ENGL      REPL
COPY     1 OUTPUT MEAN   1 1     48.4      WDM    701 FLOW     ENGL      REPL
COPY   501 OUTPUT MEAN   1 1     48.4      WDM    801 FLOW     ENGL      REPL
COPY   601 OUTPUT MEAN   1 1     48.4      WDM    901 FLOW     ENGL      REPL
RCHRES   2 HYDR   RO     1 1        1      WDM   1002 FLOW     ENGL      REPL
RCHRES   2 HYDR   STAGE  1 1        1      WDM   1003 STAG     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>           <Name> # #<-factor->     <Name>                <Name> # #***
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  END MASS-LINK    2

  MASS-LINK        3
PERLND     PWATER IFWO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    3

  MASS-LINK        5
IMPLND     IWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    5

  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13
```

```
  MASS-LINK       15
IMPLND     IWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   15

  MASS-LINK       16
RCHRES     ROFLOW                          COPY           INPUT  MEAN
  END MASS-LINK   16


END MASS-LINK

END RUN
```

Predeveloped HSPF Message File

Mitigated HSPF Message File

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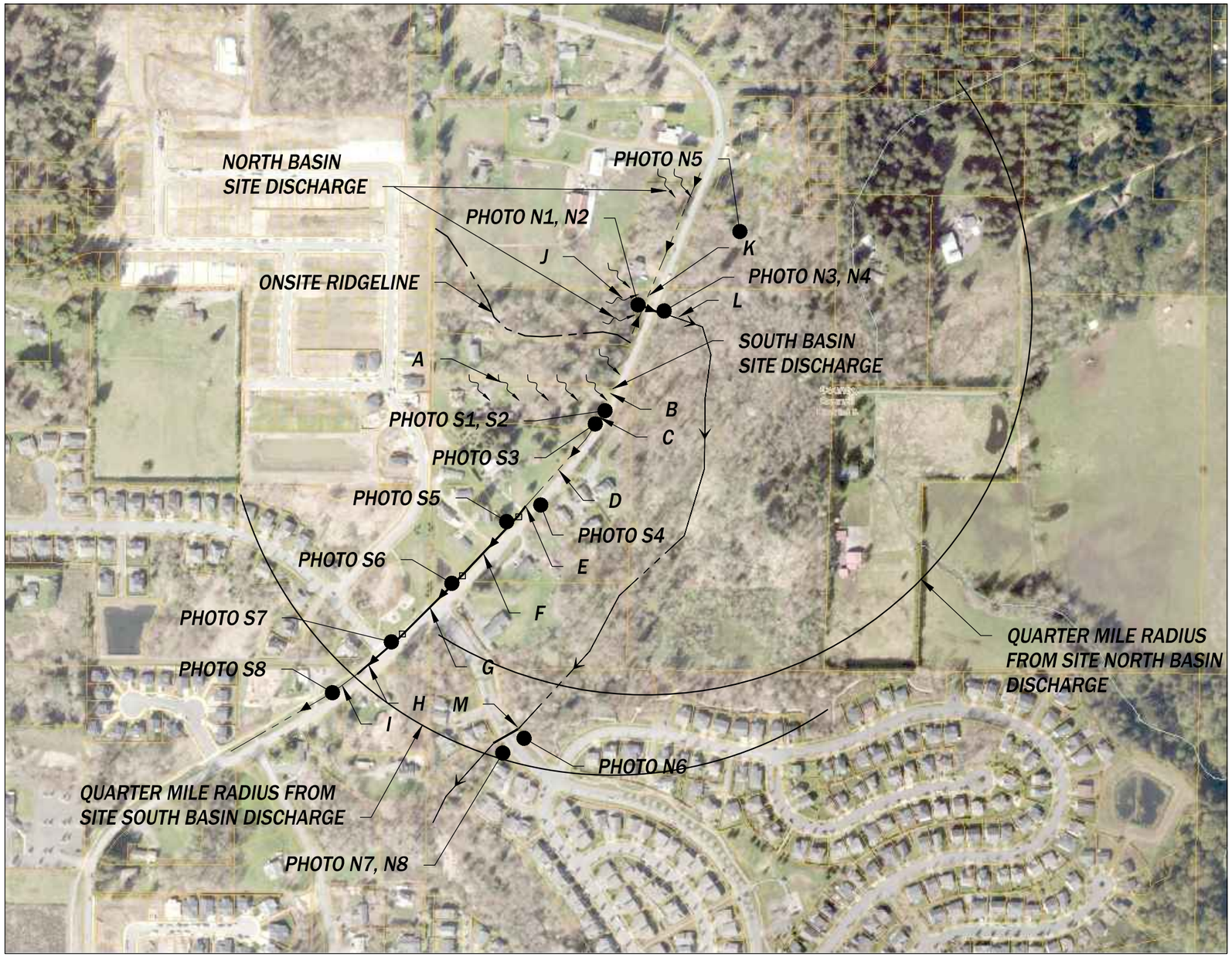
APPENDIX C

CONVEYANCE CALCULATIONS
(TO BE PROVIDED WITH FINAL ENGINEERING)

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APPENDIX D

DOWNSTREAM ANALYSIS



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0 200 400
PLAN IN FEET

NOTE:
1. THE AERIAL MAP AND PIPE SYSTEM INFORMATION SHOWN ON THIS MAP IS FROM THE PUBLIC WEB PORTAL FOR INTERACTIVE MAPPING PROVIDED BY SNOHOMISH COUNTY. IT IS INTENDED FOR A VISUAL OF THE OFFSITE ANALYSIS PURPOSES ONLY AND DOES NOT REFLECT SURVEY ACCURACY FOR ANY OTHER PURPOSE.

DOWNSTREAM PIPE
DOWNSTREAM CB
DOWNSTREAM DITCH
STREAM/WETLAND
SHEET FLOW

DOWNSTREAM ANALYSIS MAP

P:\project\005418028\Reports\TIR\181205\CAD\Appendix D_Downstream Analysis Map.dwg
3/4/2021 12:57 PM CASEY TORRES

OFF-SITE ANALYSIS DRAINAGE SYSTEM TABLE
SURFACE WATER DESIGN MANUAL, CORE REQUIREMENT #2

Basin: Woods Creek **Subbasin Name:** **Subbasin Number:**

Symbol	Drainage Component Type, Name, and Size	Drainage Component Description	Slope	Distance from site discharge	Existing Problems	Potential Problems	Observations of field inspector, resource reviewer, or resident
see map	Type: sheet flow, swale, stream, channel, pipe, pond; Size: diameter, surface area	drainage basin, vegetation, cover, depth, type of sensitive area, volume	%	¼ ml = 1,320 ft.	constrictions, under capacity, ponding, overtopping, flooding, habitat or organism destruction, scouring, bank sloughing, sedimentation, incision, other erosion		tributary area, likelihood of problem, overflow pathways, potential impacts
J	Sheet Flow	Dense grass vegetation	0-33%	50 ft. and *460 ft.	None	None	50 ft upstream to site's west discharge location, *460 ft to site's east discharge location (see downstream map)
K	Pipe, 12" PVC	Pipe extends 4.7' from daylight	3%	50-94 ft.	None	None	Pipe condition: Like New
L	Stream	Dense grass vegetation	0-3%	94 ft. - 1320+ ft.	None	None	Vegetation too dense to continue downstream
M	Culvert	No existing or potential problems visible	0-3%	1320+ ft.	None	None	Vegetation too dense to observe



Photo N1, left: Looking north, sheet flow from site's north basin flows easterly to ditch along west frontage of Chain Lake Road right-of-way and converges to a single natural discharge point as shown in photo.

Photo N2, below: Looking southerly, a close-up photo of a 12" PVC pipe culvert in great condition conveys runoff 44 LF southeasterly where runoff daylights into vegetated stream.





Photo N3, above: Runoff is conveyed through 12” PVC pipe in great condition and extends 4.7’ from grade to wetland area where runoff daylights and discharges to open channel flow. Photo taken approximately 90 feet downstream.



Photo N4, right: Runoff is conveyed along an open channel at this location within a wetland area and continues downstream in densely-vegetated conditions. The downstream path could not be followed further due to private property restrictions and impenetrable vegetation. However, from the topography of the area it is believed that the runoff continues southeast as open channel flow and stream-like conveyance beyond the quarter (0.25) mile downstream threshold.



Photo N5, above: Photo taken approx. 230 LF outside the downstream path of conveyance. Runoff continues downstream within the densely-vegetated wetland area and likely turns southerly.

Photo N6, below: Photo taken past the quarter (0.25) mile threshold at approximately 1,700 feet downstream, runoff reaches a culvert downstream in densely-vegetated wetland area and enters a likely functional culvert with no visible potential problems.



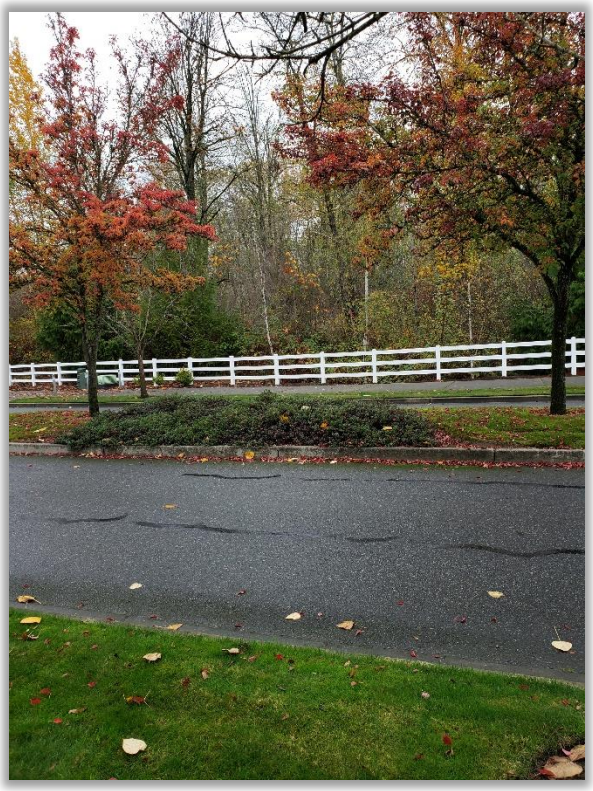


Photo N7, left: Runoff is conveyed through culvert not visible from level 1 downstream analysis and no potential problems are visible. This photo was taken beyond the quarter (0.25) mile downstream threshold.



Photo N8, right: Photo taken approximately 1,750 feet downstream, runoff daylights at end of existing culvert with no visible existing problems nor potential problems evident and continues downstream beyond the quarter (0.25) mile downstream threshold where a series of wetland areas and culverts convey surface water to the Skykomish river as part of the Snohomish river watershed.

OFF-SITE ANALYSIS DRAINAGE SYSTEM TABLE
SURFACE WATER DESIGN MANUAL, CORE REQUIREMENT #2

Basin: Woods Creek **Subbasin Name:** **Subbasin Number:**

Symbol	Drainage Component Type, Name, and Size	Drainage Component Description	Slope	Distance from site discharge	Existing Problems	Potential Problems	Observations of field inspector, resource reviewer, or resident
see map	Type: sheet flow, swale, stream, channel, pipe, pond; Size: diameter, surface area	drainage basin, vegetation, cover, depth, type of sensitive area, volume	%	¼ ml = 1,320 ft.	constrictions, under capacity, ponding, overtopping, flooding, habitat or organism destruction, scouring, bank sloughing, sedimentation, incision, other erosion		tributary area, likelihood of problem, overflow pathways, potential impacts
A	Sheet Flow	Dense Forest Vegetation	8-15%	*0 ft.	None	None	*Sheet Flow begins along full extent of site's south property boundary (0-500ft upstream of ditch); Downstream analysis begins at site's SE corner.
B	Ditch	Grass Vegetation	0-5%	0-64 ft.	None	None	
C	Culvert, Conc. 12"	Pipe end buried	0-5%	64-82 ft.	None	None	Pipe end buried, Ditch sedimentation and overgrown vegetation evident
D	Ditch	Grass Vegetation	0-5%	82-532 ft.	None	None	
E	SD Pipe, PVC 12"	Exist. SD Infrastructure	0-5%	532-554 ft.	None	None	
F	SD Pipe, PVC 12"	Exist. SD Infrastructure	0-5%	554-823 ft.	None	None	
G	SD Pipe, PVC 12"	Exist. SD Infrastructure	0-5%	823-1152 ft.	None	None	
H	SD Pipe, PVC 12"	Exist. SD Infrastructure	0-5%	1152-1320+ ft.	None	None	
I	Ditch	Pipe daylights, Grass Vegetation	0-10%	1320+ ft.	None	None	Ditch continues downstream to Woods Creek, Skykomish River



Photo S1, above: Looking north at the southeast corner of the site, runoff sheet flows southerly from on-site topographic ridge and easterly to vegetated ditch along Chain Lake Road right-of-way. The site is developed and comprised of pasture, single family homes, and outlying structures.



Photo S2, right: Looking southerly, runoff continues downstream in right-of-way ditch and enters 12” concrete culvert 64 feet from site.



Photo S3, left: Looking north, ditch continues southerly and flow through 12" concrete culvert shown in Photo #2 and daylights 22 LF south, 82 feet from site.



Photo S4, left: Looking south, a buried culvert of unidentified material conveys runoff in ditch under second driveway. Photo taken approximately 532 feet downstream.

Photo S5, right: Looking north, 12” PVC pipe ends at open grate catch basin approximately 554 feet downstream, which conveys runoff in ditch under second driveway.





Photo S6, left: Looking north, 12” PVC pipe ends at open grate catch basin approximately 823 feet downstream, which conveys runoff in existing storm drainage infrastructure.



Photo S7, left: Looking north, 12” PVC pipe ends at open grate catch basin approximately 1,152 feet downstream, which conveys runoff in existing storm drainage infrastructure.

Photo 8, right: Looking north, 12” PVC pipe daylights approximately 1344 feet downstream, beyond the 1,320 feet (1/4 mile) threshold, which ends the South Basin downstream analysis. Runoff continues downstream in ditch to Woods Creek, to the Skykomish River as part of the Snohomish River watershed.



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APPENDIX E

OPERATIONS AND MAINTENANCE MANUAL

V-4.6 Maintenance Standards for Drainage Facilities

The facility-specific maintenance standards contained in this section are intended to be conditions for determining if maintenance actions are required as identified through inspection. They are not intended to be measures of the facility's required condition at all times between inspections. In other words, exceedence of these conditions at any time between inspections and/or maintenance does not automatically constitute a violation of these standards. However, based upon inspection observations, the inspection and maintenance schedules shall be adjusted to minimize the length of time that a facility is in a condition that requires a maintenance action.

Table V-4.5.2(1) Maintenance Standards - Detention Ponds

Maintenance Component	Defect	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed
General	Trash & Debris	Any trash and debris which exceed 1 cubic feet per 1,000 square feet. In general, there should be no visual evidence of dumping. If less than threshold all trash and debris will be removed as part of next scheduled maintenance.	Trash and debris cleared from site
	Poisonous Vegetation and noxious weeds	Any poisonous or nuisance vegetation which may constitute a hazard to maintenance personnel or the public. Any evidence of noxious weeds as defined by State or local regulations. (Apply requirements of adopted IPM policies for the use of herbicides).	No danger of poisonous vegetation where maintenance personnel or the public might normally be. (Coordinate with local health department) Complete eradication of noxious weeds may not be possible. Compliance with State or local eradication policies required
	Contaminants	Any evidence of oil,	No contaminants or pol-

Table V-4.5.2(3) Maintenance Standards - Closed Detention Systems (Tanks/Vaults) (continued)

Maintenance Component	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
	Locking Mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than 1/2 inch of thread (may not apply to self-locking lids).	Mechanism opens with proper tools.
	Cover Difficult to Remove	One maintenance person cannot remove lid after applying normal lifting pressure. Intent is to keep cover from sealing off access to maintenance.	Cover can be removed and reinstalled by one maintenance person.
	Ladder Rungs Unsafe	Ladder is unsafe due to missing rungs, misalignment, not securely attached to structure wall, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
Catch Basins	See "Catch Basins" (No. 5)	See "Catch Basins" (No. 5).	See "Catch Basins" (No. 5).

Table V-4.5.2(4) Maintenance Standards - Control Structure/Flow Restrictor

Maintenance Component	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
General	Trash and Debris (Includes Sediment)	Material exceeds 25% of sump depth or 1 foot below orifice plate.	Control structure orifice is not blocked. All trash and debris removed.
	Structural Damage	Structure is not securely attached to manhole wall. Structure is not in upright position (allow up to 10% from plumb). Connections to outlet pipe	Structure securely attached to wall and outlet pipe. Structure in correct position. Connections to outlet pipe are water tight; structure repaired or replaced and works as

Table V-4.5.2(4) Maintenance Standards - Control Structure/Flow Restrictor (continued)

Maintenance Component	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
		are not watertight and show signs of rust. Any holes - other than designed holes - in the structure.	designed. Structure has no holes other than designed holes.
Cleanout Gate	Damaged or Missing	Cleanout gate is not watertight or is missing. Gate cannot be moved up and down by one maintenance person. Chain/rod leading to gate is missing or damaged. Gate is rusted over 50% of its surface area.	Gate is watertight and works as designed. Gate moves up and down easily and is watertight. Chain is in place and works as designed. Gate is repaired or replaced to meet design standards.
Orifice Plate	Damaged or Missing	Control device is not working properly due to missing, out of place, or bent orifice plate.	Plate is in place and works as designed.
	Obstructions	Any trash, debris, sediment, or vegetation blocking the plate.	Plate is free of all obstructions and works as designed.
Overflow Pipe	Obstructions	Any trash or debris blocking (or having the potential of blocking) the overflow pipe.	Pipe is free of all obstructions and works as designed.
Manhole	See "Closed Detention Systems" (No. 3).	See "Closed Detention Systems" (No. 3).	See "Closed Detention Systems" (No. 3).
Catch Basin	See "Catch Basins" (No. 5).	See "Catch Basins" (No. 5).	See "Catch Basins" (No. 5).

Table V-4.5.2(5) Maintenance Standards - Catch Basins

Maintenance Component	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is performed
General	Trash & Debris	Trash or debris which is located immediately in front of the catch basin opening or is blocking inletting capacity of the basin by more than 10%. Trash or debris (in the basin) that exceeds 60 percent of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of six inches clearance from the debris surface to the invert of the lowest pipe. Trash or debris in any inlet or outlet pipe blocking more than 1/3 of its height. Dead animals or vegetation that could generate odors that could cause complaints or dangerous gases (e.g., methane).	No Trash or debris located immediately in front of catch basin or on grate opening. No trash or debris in the catch basin. Inlet and outlet pipes free of trash or debris. No dead animals or vegetation present within the catch basin.
	Sediment	Sediment (in the basin) that exceeds 60 percent of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 6 inches clearance from the sediment surface to the invert of the lowest pipe.	No sediment in the catch basin
	Structure Damage to Frame and/or Top Slab	Top slab has holes larger than 2 square inches or cracks wider than 1/4 inch. (Intent is to make sure no material is running into basin).	Top slab is free of holes and cracks. Frame is sit-

Table V-4.5.2(5) Maintenance Standards - Catch Basins (continued)

Maintenance Component	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is performed
		Frame not sitting flush on top slab, i.e., separation of more than 3/4 inch of the frame from the top slab. Frame not securely attached	ting flush on the riser rings or top slab and firmly attached.
	Fractures or Cracks in Basin Walls/ Bottom	Maintenance person judges that structure is unsound. Grout fillet has separated or cracked wider than 1/2 inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.	Basin replaced or repaired to design standards. Pipe is regrouted and secure at basin wall.
	Settlement/ Misalignment	If failure of basin has created a safety, function, or design problem.	Basin replaced or repaired to design standards.
	Vegetation	Vegetation growing across and blocking more than 10% of the basin opening. Vegetation growing in inlet/outlet pipe joints that is more than six inches tall and less than six inches apart.	No vegetation blocking opening to basin. No vegetation or root growth present.
	Contamination and Pollution	See "Detention Ponds" (No. 1).	No pollution present.
Catch Basin Cover	Cover Not in Place	Cover is missing or only partially in place. Any open catch basin requires maintenance.	Catch basin cover is closed
	Locking Mechanism Not	Mechanism cannot be opened by one maintenance person with proper tools. Bolts into	Mechanism opens with

Table V-4.5.2(5) Maintenance Standards - Catch Basins (continued)

Maintenance Component	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is performed
	Working	frame have less than 1/2 inch of thread.	proper tools.
	Cover Difficult to Remove	One maintenance person cannot remove lid after applying normal lifting pressure. (Intent is keep cover from sealing off access to maintenance.)	Cover can be removed by one maintenance person.
Ladder	Ladder Rungs Unsafe	Ladder is unsafe due to missing rungs, not securely attached to basin wall, misalignment, rust, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.
Metal Grates (If Applicable)	Grate opening Unsafe	Grate with opening wider than 7/8 inch.	Grate opening meets design standards.
	Trash and Debris	Trash and debris that is blocking more than 20% of grate surface inletting capacity.	Grate free of trash and debris.
	Damaged or Missing.	Grate missing or broken member(s) of the grate.	Grate is in place and meets design standards.

Table V-4.5.2(6) Maintenance Standards - Debris Barriers (e.g., Trash Racks)

Maintenance Components	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
General	Trash and Debris	Trash or debris that is plugging more than 20% of the openings in the barrier.	Barrier cleared to design flow capacity.
Metal	Damaged/ Missing	Bars are bent out of shape more than 3 inches.	Bars in place with no bends more than 3/4

Table V-4.5.2(6) Maintenance Standards - Debris Barriers (e.g., Trash Racks) (continued)

Maintenance Components	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
	Bars.	Bars are missing or entire barrier missing. Bars are loose and rust is causing 50% deterioration to any part of barrier.	inch. Bars in place according to design. Barrier replaced or repaired to design standards.
	Inlet/Outlet Pipe	Debris barrier missing or not attached to pipe	Barrier firmly attached to pipe

Table V-4.5.2(7) Maintenance Standards - Energy Dissipaters

Maintenance Components	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
External:			
Rock Pad	Missing or Moved Rock	Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil.	Rock pad replaced to design standards.
	Erosion	Soil erosion in or adjacent to rock pad.	Rock pad replaced to design standards.
Dispersion Trench	Pipe Plugged with Sediment	Accumulated sediment that exceeds 20% of the design depth.	Pipe cleaned/-flushed so that it matches design.
	Not Discharging Water Properly	Visual evidence of water discharging at concentrated points along trench (normal condition is a "sheet flow" of water along trench). Intent is to prevent erosion damage.	Trench redesigned or rebuilt to standards.
	Perforations Plugged.	Over 1/2 of perforations in pipe are plugged with debris and sediment.	Perforated pipe cleaned or replaced.

Table V-4.5.2(7) Maintenance Standards - Energy Dissipaters (continued)

Maintenance Components	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
	Water Flows Out Top of "Distributor" Catch Basin.	Maintenance person observes or receives credible report of water flowing out during any storm less than the design storm or its causing or appears likely to cause damage.	Facility rebuilt or redesigned to standards.
	Receiving Area Over-Saturated	Water in receiving area is causing or has potential of causing landslide problems.	No danger of landslides.
Internal:			
Manhole/Chamber	Worn or Damaged Post, Baffles, Side of Chamber	Structure dissipating flow deteriorates to 1/2 of original size or any concentrated worn spot exceeding one square foot which would make structure unsound.	Structure replaced to design standards.
	Other Defects	See "Catch Basins" (No. 5).	See "Catch Basins" (No. 5).

Table V-4.5.2(8) Maintenance Standards - Typical Biofiltration Swale

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Recommended Maintenance to Correct Problem
General	Sediment Accumulation on Grass	Sediment depth exceeds 2 inches.	Remove sediment deposits on grass treatment area of the bio-swale. When finished, swale should be level from side to side and drain freely toward outlet. There should be no areas of standing water once inflow has ceased.
	Standing Water	When water stands in the swale between storms and does not drain freely.	Any of the following may apply: remove sediment or trash blockages, improve grade from head to foot of swale, remove clogged check dams, add underdrains or convert to a wet

Table V-4.5.2(17) Maintenance Standards - Coalescing Plate Oil/Water Separators (continued)

Maintenance Component	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
		Cracks wider than 1/2-inch at the joint of any inlet/outlet pipe or evidence of soil particles entering through the cracks.	inlet/outlet pipe.
	Access Ladder Damaged	Ladder is corroded or deteriorated, not functioning properly, not securely attached to structure wall, missing rungs, cracks, and misaligned.	Ladder replaced or repaired and meets specifications, and is safe to use as determined by inspection personnel.

Table V-4.5.2(18) Maintenance Standards - Catch Basin Inserts

Maintenance Component	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
General	Sediment Accumulation	When sediment forms a cap over the insert media of the insert and/or unit.	No sediment cap on the insert media and its unit.
	Trash and Debris Accumulation	Trash and debris accumulates on insert unit creating a blockage/restriction.	Trash and debris removed from insert unit. Runoff freely flows into catch basin.
	Media Insert Not Removing Oil	Effluent water from media insert has a visible sheen.	Effluent water from media insert is free of oils and has no visible sheen.
	Media Insert Water Saturated	Catch basin insert is saturated with water and no longer has the capacity to absorb.	Remove and replace media insert
	Media Insert-Oil Saturated	Media oil saturated due to petroleum spill that drains into catch basin.	Remove and replace media insert.
	Media Insert Use Beyond Product Life	Media has been used beyond the typical average life of media insert product.	Remove and replace media at regular intervals, depending on insert product.

EXHIBIT 17

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Gibson Traffic Consultants, Inc.
2813 Rockefeller Avenue
Suite B
Everett, WA 98201
425.339.8266

Garibaldi
Traffic Impact Analysis

Jurisdiction: City of Monroe

August 2021



GTC #18-334

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1. DEVELOPMENT IDENTIFICATION

Gibson Traffic Consultants, Inc. (GTC) has been retained to provide a traffic impact analysis for the proposed Garibaldi development to address the City of Monroe, Snohomish County and Washington State Department of Transportation (WSDOT) traffic impacts. This report also addresses comments from City of Monroe staff and corrections in the analysis for consistency through the analysis. Brad Lincoln, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of ITE.

The Garibaldi development is proposed to consist of a total of 90 single-family residential units that will be constructed in one phase. There are 4 existing single-family residential units on site that will be removed and credited to the development. The analysis in this report has therefore been performed for 86 net new single-family residential units. The development site is located along the west side of Chain Lake Road, north of Rainier View Road SE. A site vicinity map has been included in Figure 1.

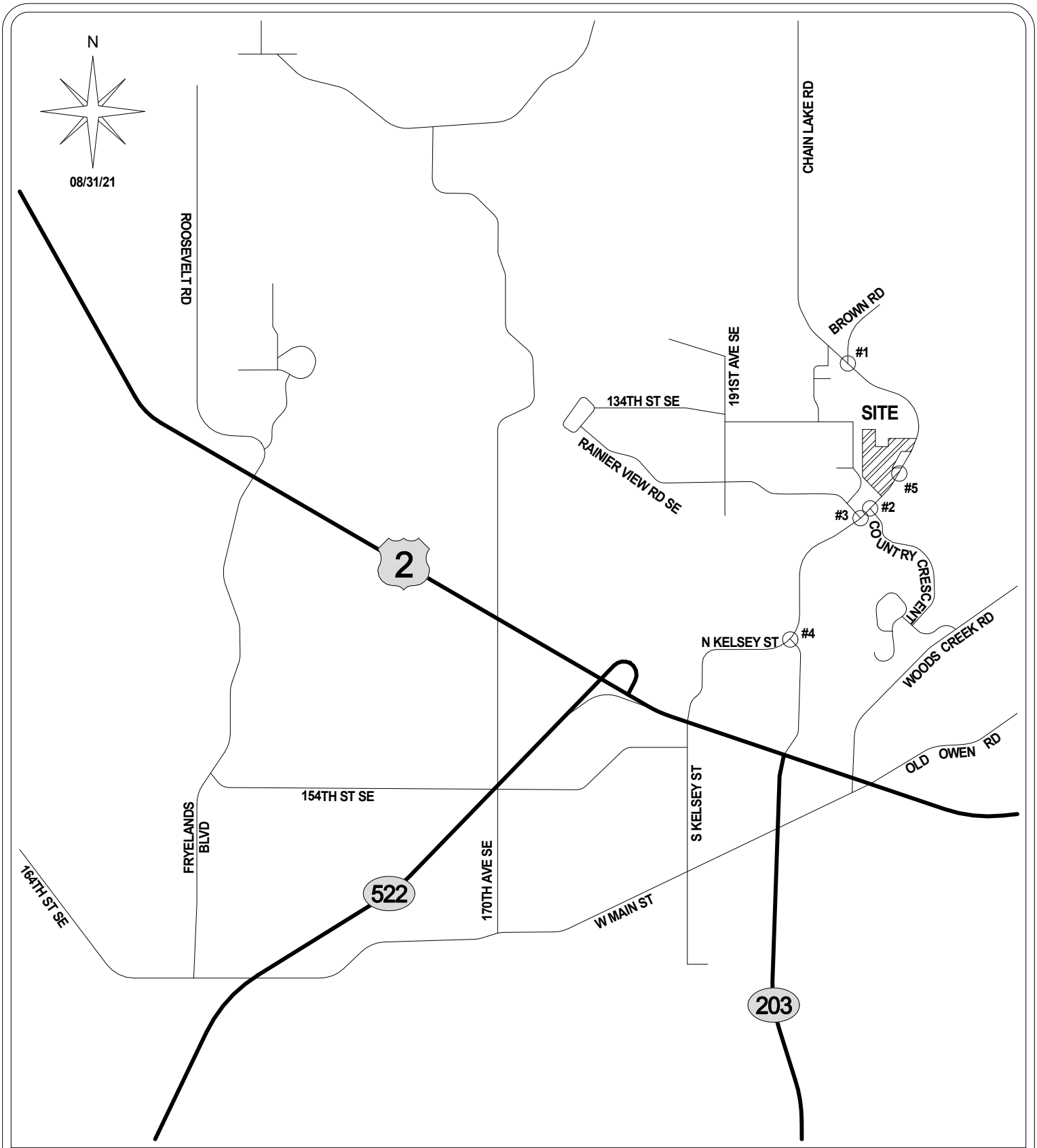
2. METHODOLOGY

Trip generation calculations for the Garibaldi development have been performed utilizing average trip generation data contained in the Institute of Transportation Engineers' (ITE) *Trip Generation, 10th Edition (2017)*. The distribution of trips generated by the site is based on approved distributions for developments in the site vicinity.

Intersection level of service analysis has been performed based on typical City of Monroe requirements and previous scoping conversations with City of Monroe staff. Level of service analysis has been performed for the following intersections:

1. Chain Lake Road at Brown Road
2. Chain Lake Road at Country Crescent Boulevard
3. Chain Lake Road at Rainier View Road SE
4. Chain Lake Road at Kelsey Street
5. Chain Lake Road at Site Access

Congestion at intersections is generally measured in terms of level of service (LOS). In accordance with *Highway Capacity Manual: 6th Edition (HCM)* by the Transportation Research Board, road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The level of service at two-way stop-controlled intersections is based on the approach with the highest delay. The level of service at all-way stop-controlled, signalized, and roundabout intersections is based on the average delay of all approaches. Geometric characteristics and conflicting traffic movements are taken into consideration when determining level of service values. A summary of the intersection level of service criteria is included in Table 1.



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GARIBALDI DEVELOPMENT
86 NET NEW SINGLE FAMILY DWELLINGS

CITY OF MONROE

LEGEND

DEVELOPMENT SITE

#X **STUDY INTERSECTION**

FIGURE 1

SITE VICINITY MAP

Table 1: Level of Service Criteria for Intersections

Level of Service[1]	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	Signalized Intersections
A	Little/No Delay	≤10	≤10
B	Short Delays	>10 and ≤15	>10 and ≤20
C	Average Delays	>15 and ≤25	>20 and ≤35
D	Long Delays	>25 and ≤35	>35 and ≤55
E	Very Long Delays	>35 and ≤50	>55 and ≤80
F	Extreme Delays[2]	>50	>80

The City of Monroe evaluates operations on a corridor level based on the weighted average delay of the intersections along the corridor. The level of service analysis has been performed utilizing the *Synchro 10.3 Build 151* software for signalized, two-way stop-controlled and all-way stop controlled intersections. The *Sidra 8.0* software has been utilized for the intersection of Chain Lake Road at Kelsey Street (Intersection 4), which is a roundabout. This intersection is not part of the Chain Lake Road corridor. The intersection level of service threshold for the Chain Lake Road corridor and the intersection of Chain Lake Road at Kelsey Street is LOS D.

The City of Monroe also has an interlocal agreement with Snohomish County to provide turning movements at Snohomish County key intersections impacted with 3 or more directional peak-hour trips on any approach or departure and for traffic mitigation fees.

[1] **Source:** *Highway Capacity Manual 6th Edition.*

LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).
LOS B: Generally stable traffic flow conditions.
LOS C: Occasional back-ups may develop, but delay to vehicles is short term and still tolerable.
LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e. vehicles delayed one cycle or less at signal).
LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.
LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.

[2] When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.

3. TRIP GENERATION

The trip generation calculations for the Garibaldi development are based on the average trip generation rates for ITE Land Use Code 210, Single-Family Detached Housing. The trip generation calculations are based on the 86 net new units of the Garibaldi development, which includes credit for the 2 existing units on the site, and are summarized in Table 2.

Table 2: Trip Generation Summary

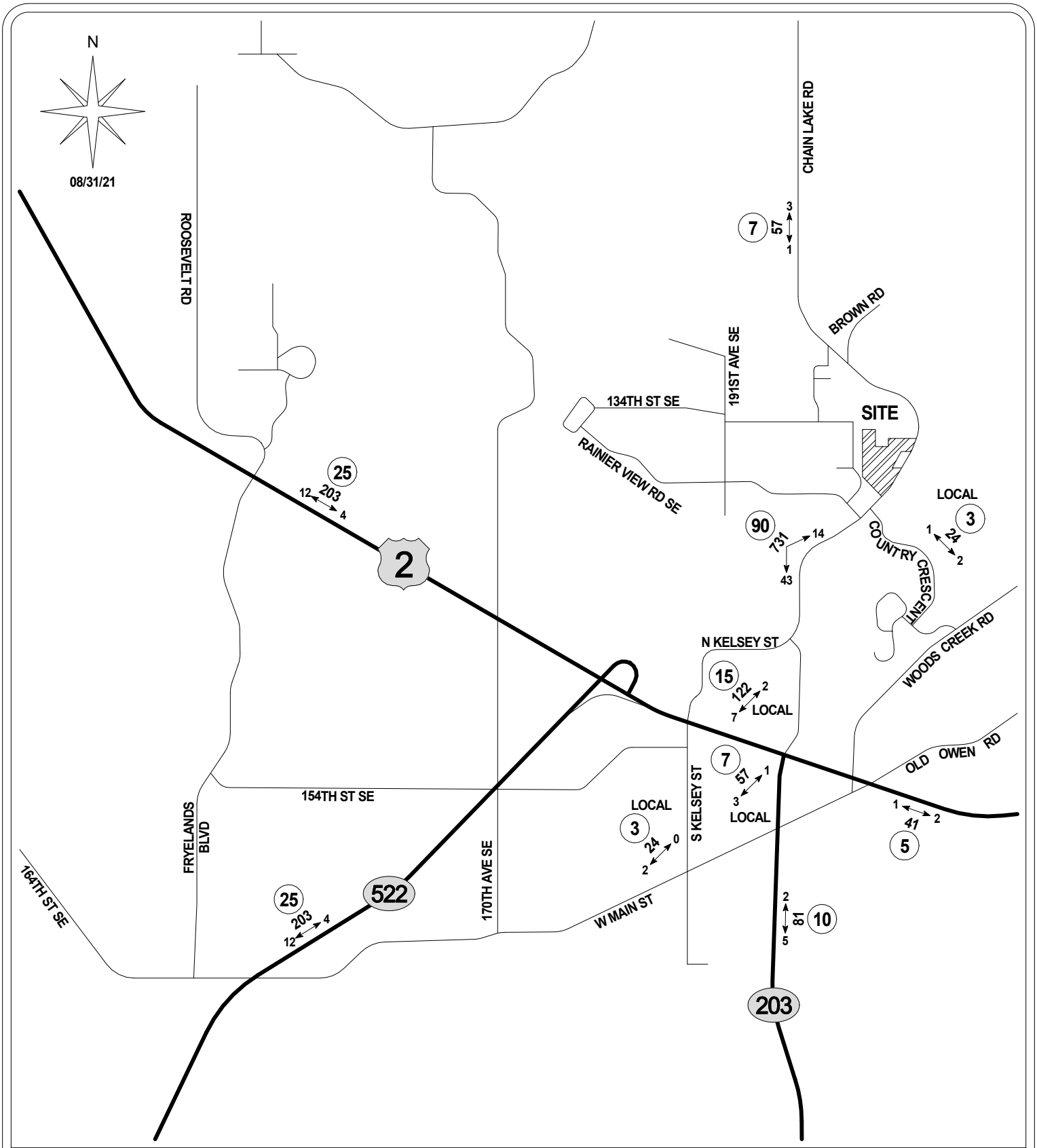
86 Net New Single-Family Residential Units	Average Daily Trips			AM Peak-Hour Trips			PM Peak-Hour Trips		
	Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total
Generation Rate	9.44 trips per unit			0.74 trips per unit			0.99 trips per unit		
Splits	50%	50%	100%	25%	75%	100%	63%	37%	100%
Trips	405.92	405.92	811.84	15.91	47.73	63.64	53.64	31.50	85.14

The 86 net new units are anticipated to generate approximately 812 average daily trips with approximately 64 AM peak-hour trips and 85 PM peak-hour trips.

4. TRIP DISTRIBUTION

The distribution of trips generated by the Garibaldi development is based on approved distributions for developments in the site vicinity. It is anticipated that 25% of the trips generated by the development will travel to and from the west along US-2. Approximately 35% of the trips generated by the development will travel to and from the south, twenty-five percent along SR-522 and ten percent along SR-203. It is estimated that 28% of the trips generated by the development will travel to and from local areas in the vicinity of the development, ten percent south of US-2, fifteen percent north of US-2, and three percent to the east. The remaining 12% of the trips generated by the development are anticipated to travel to and from the north and east, seven percent to and from the north along Chain Lake Road and five percent to and from the east along US-2. Detailed distributions are included in Figure 2 for the AM peak-hour and Figure 3 for the PM peak-hour.

The interlocal agreement with Snohomish County requires key intersections impacted with 3 or more directional peak-hour trips on any approach or departure to be shown. The Garibaldi development will impact 7 key intersections during the AM and PM peak-hours. The key intersection impacts are shown in detail in the attachments of this report. Snohomish County's trip distribution policy states that trips along US-2 do not need to be distributed west of 88th Street SE. Trips traveling to and from the south along SR-522 and SR-203 are anticipated to travel to and from King County.



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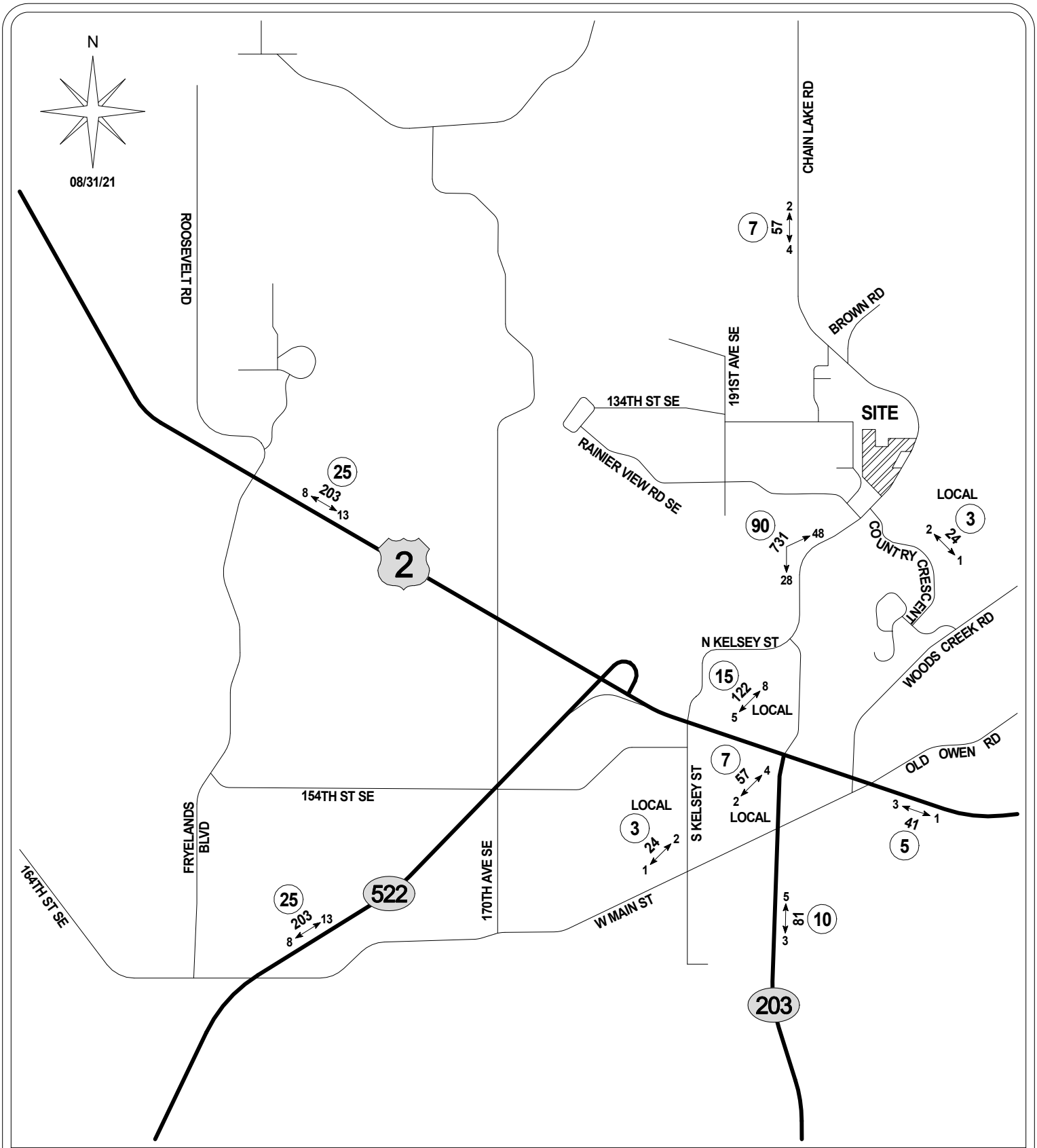
LEGEND

AWDT
AM ⟷ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 2

DEVELOPMENT TRIP DISTRIBUTION AM PEAK-HOUR



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AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3

DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR

5. INTERSECTION LEVEL OF SERVICE ANALYSIS

The intersections that have been analyzed as part of this report are based on the typical City of Monroe and WSDOT requirements and previous scoping discussions with City of Monroe staff. Level of service analysis has been performed for the following intersections for the weekday PM peak-hour:

1. Chain Lake Road at Brown Road
2. Chain Lake Road at Country Crescent Boulevard
3. Chain Lake Road at Rainier View Road SE
4. Chain Lake Road at Kelsey Street
5. Chain Lake Road at Site Access

The analysis has been completed for the 2018 existing, 2031 baseline and 2031 future with development conditions.

5.1 Turning Movement Volumes

Historical counts were used in lieu of collecting new counts at the study intersection due to the Covid-19 Pandemic. The existing turning movements at the study intersections are based on data collected by the independent count firm, Traffic Data Gathering (TDG), in January and March 2018. An additional count was provided by the City of Monroe, performed in September 2018 by the independent count firm Idax. The existing turning movements at the study intersections are shown in Figure 4.

The 2031 baseline volumes have been calculated using a 10-year horizon period and applying a 2% annually compounding growth rate with the following pipeline developments (new units after credit for existing units are shown):

- Eaglemont I-III (F.K.A. Eaglemont) – 15 unconstructed new single-family units
- Eaglemont IV (F.K.A. Eaglemont IV-VIII) – 117 new single-family units
- Eaglemont V – 15 new single-family units
- Eaglemont VI (F.K.A. Sky View Ridge) – 44 new single-family units
- Eaglemont VII – 41 new single-family units
- Easton Cove (F.K.A. Klier Property) – 88 new single-family units
- Sweetbriar – 100 new single-family units
- Skycroft – 25 new single-family units
- Clothier Short Plat – 6 new single-family units
- Woods Creek Highlands – 24 new single-family units
- Kestrel Ridge – 44 new single-family units

The approved PM peak-hour trip distributions for the pipeline developments are included in the attachments. For the pipeline projects where a trip distribution was not available, the pipeline trips were distributed in accordance with the Garibaldi distribution.

The Eaglemont I-III development is anticipated to have a total of 149 units, however, GTC staff surveyed the area and found 134 completed and lived-in houses at the time of the counts in March 2018, resulting in 15 unconstructed houses for the Eaglemont I-III development. Additionally, Easton Cove has been updated to include one more unit (one more inbound trip) and Sweetbriar has been updated to include 6 fewer units (four fewer inbound trips and two fewer outbound trips) from the information provided in the attachments. Although the count provided by the city was performed later in the year, the same number of pipeline trips were applied to the intersection. This will make the volume at the intersection conservatively high as more houses would have been completed between the January/March counts and the September count.

The 2031 baseline turning movements at the study intersections are shown in Figure 5. The 2031 future with development turning movements were calculated by adding the trips from the development to the 2031 baseline turning movements. The 2031 future with development turning movements are shown in Figure 6. The existing turning movement counts and turning movement calculations are included in the attachments.

5.2 Intersection Level of Service Results

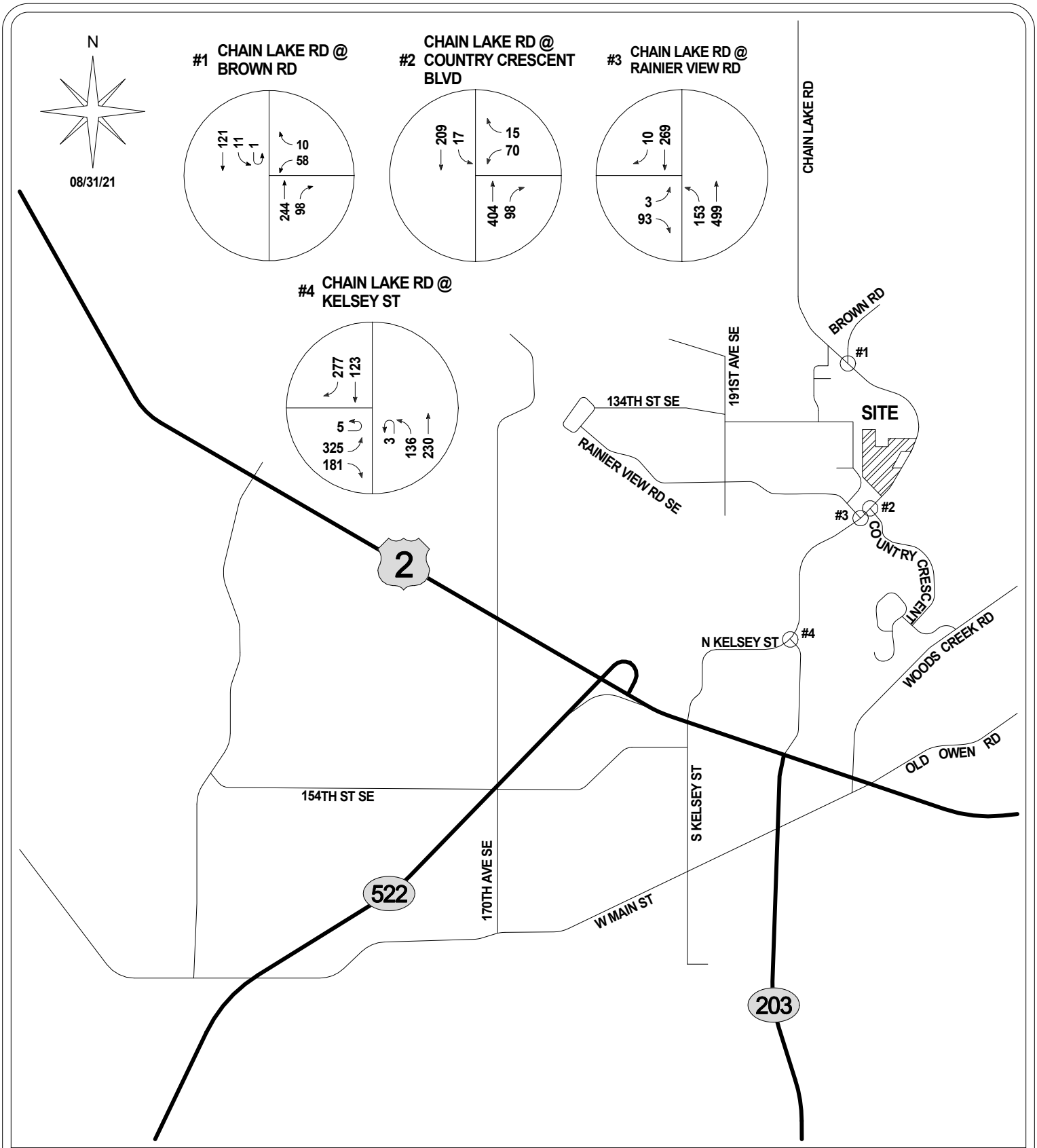
The level of service analysis has been performed utilizing the existing control, channelization, peak-hour factors and heavy-vehicle factors from the 2018 counts.

The level of service analysis shows that the development will not cause the level of service to change at any of the study intersections and the Chain Lake Corridor is anticipated to operate at acceptable LOS D with the development. The level of service results for the study intersections are summarized in Table 3.

Table 3: Intersection Level of Service Summary

Intersection	Intersection Type	2018 Existing Conditions		2031 Baseline Conditions		2031 Future Conditions with Development	
		LOS	Delay	LOS	Delay	LOS	Delay
1. Chain Lake Road at Brown Road	Two-Way Stop-Control	B	11.0 sec	C	18.7 sec	C	18.8 sec
2. Chain Lake Road at Country Crescent Blvd	Two-Way Stop-Controlled	C	15.1 sec	D	29.5 sec	D	34.4 sec
3. Chain Lake Road at Rainier View Road SW	Two-Way Stop-Control	B	13.0 sec	E	37.0 sec	E	44.6 sec
Chain Lake Corridor		**B**	**12.9 sec**	**C**	**30.9 sec**	**D**	**36.2 sec**
4. Chain Lake Road at Kelsey Street	Roundabout	A	7.3 sec	B	13.4 sec	B	16.5 sec
5. Chain Lake Road at Site Access	Two-Way Stop-Controlled	---	---	---	---	B	12.0 sec

The level of service calculations are included in the attachments.



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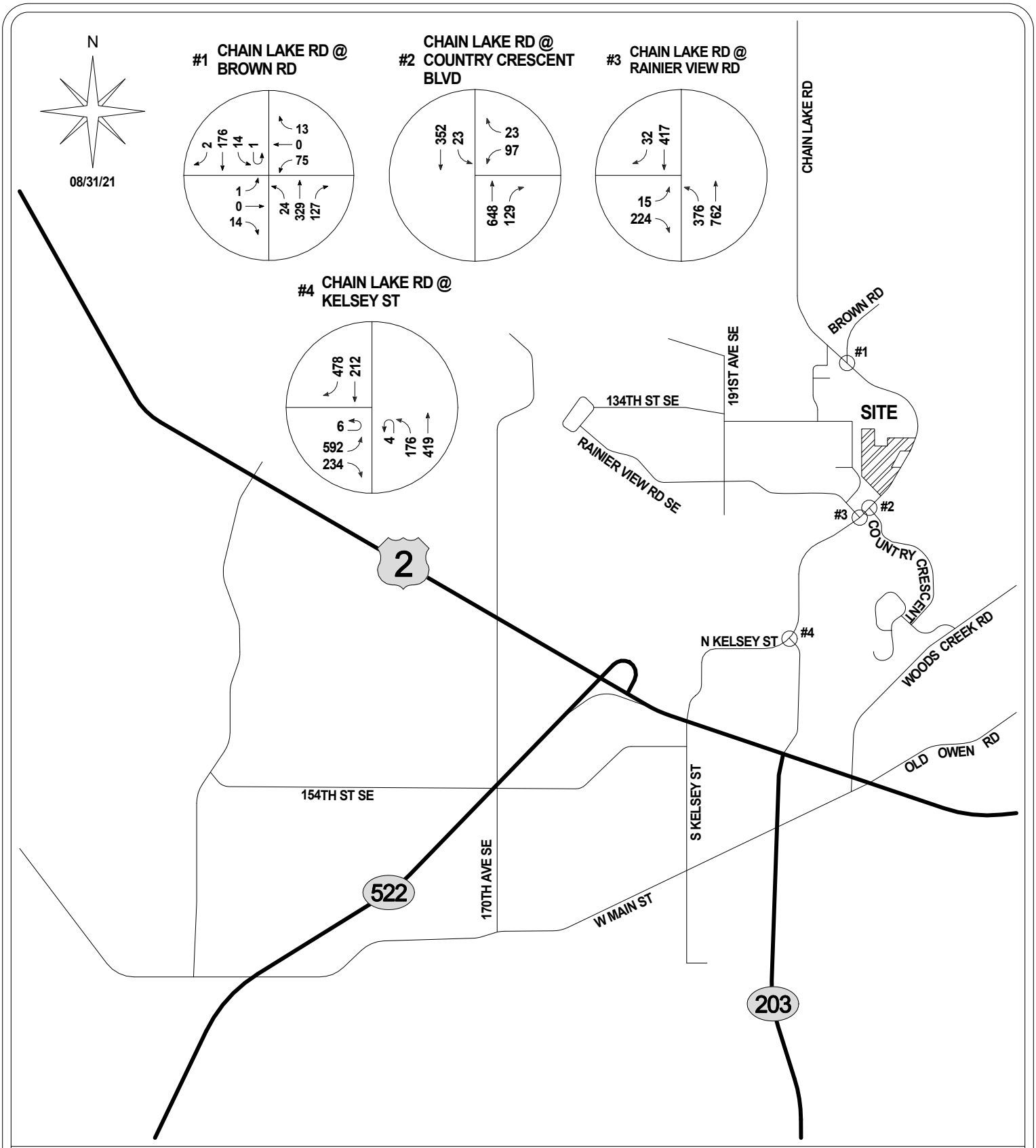
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XXX → PM PEAK-HOUR TURNING MOVEMENT VOLUMES

FIGURE 4

EXISTING TURNING MOVEMENTS



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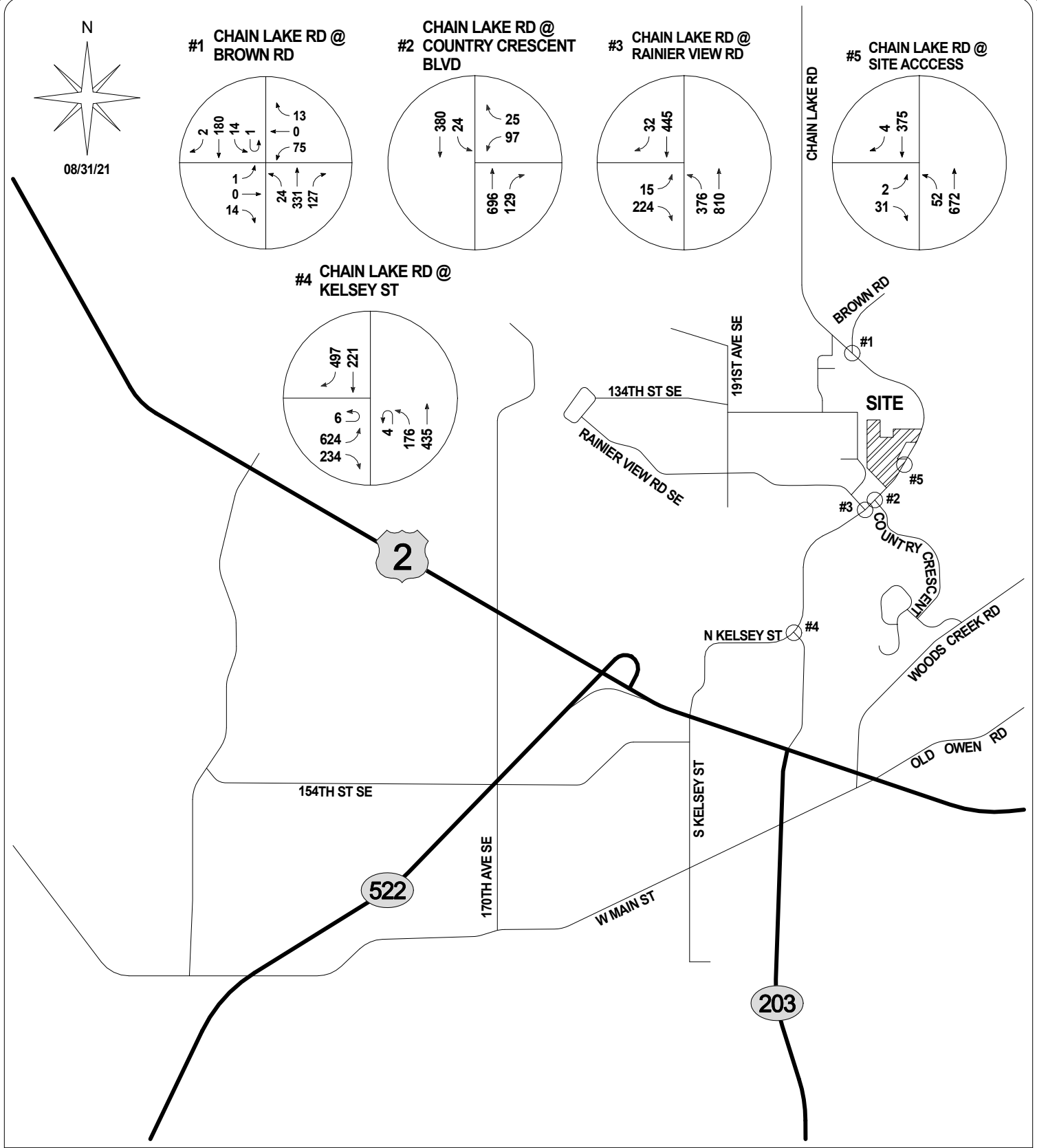
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XXX → PM PEAK-HOUR TURNING MOVEMENT VOLUMES

FIGURE 5

2031 BASELINE TURNING MOVEMENTS



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XXX → PM PEAK-HOUR TURNING MOVEMENT VOLUMES

FIGURE 6

2031 FUTURE WITH DEVELOPMENT TURNING MOVEMENTS

6. TRAFFIC MITIGATION FEES

The Washington Growth Management Act and Revised Code of Washington 82.02.050(2) authorize local jurisdictions to establish proportionate share traffic mitigation fees in order to fund capital facilities, such as roads and intersections. The Garibaldi development is located within the City of Monroe, which has established traffic mitigation fees. The City of Monroe also has interlocal agreements with Snohomish County and WSDOT for traffic mitigation fees.

6.1 City of Monroe

The City of Monroe has established a traffic mitigation fee schedule. The fee for single-family residential units is $3,570 per unit. The 86 net new units of the Garibaldi development will result in City of Monroe traffic mitigation fees of $307,020. It should be noted that these fees may not vest and may be higher when the building applications are pulled.

6.2 Snohomish County

The City of Monroe and Snohomish County have an interlocal agreement that provides for the payment of traffic mitigation for impacts to Snohomish County roadways by City of Monroe developments. Traffic mitigation fees are based on predetermined area impacts or impacts to actual improvement projects. The trip distribution shows that the Garibaldi development will not impact any Snohomish County improvement projects in the Transportation Needs Report with three directional PM peak-hour trips. According to Section 3(a)2 of the S*nohomish County Traffic Worksheet and Traffic Study Requirements for Developments in the City of Monroe*, City of Monroe developments are only required to pay traffic mitigation fees for improvements in the Transportation Needs Report impacted with three directional peak-hour trips. Snohomish County traffic mitigation fees should therefore not be required for the Garibaldi development.

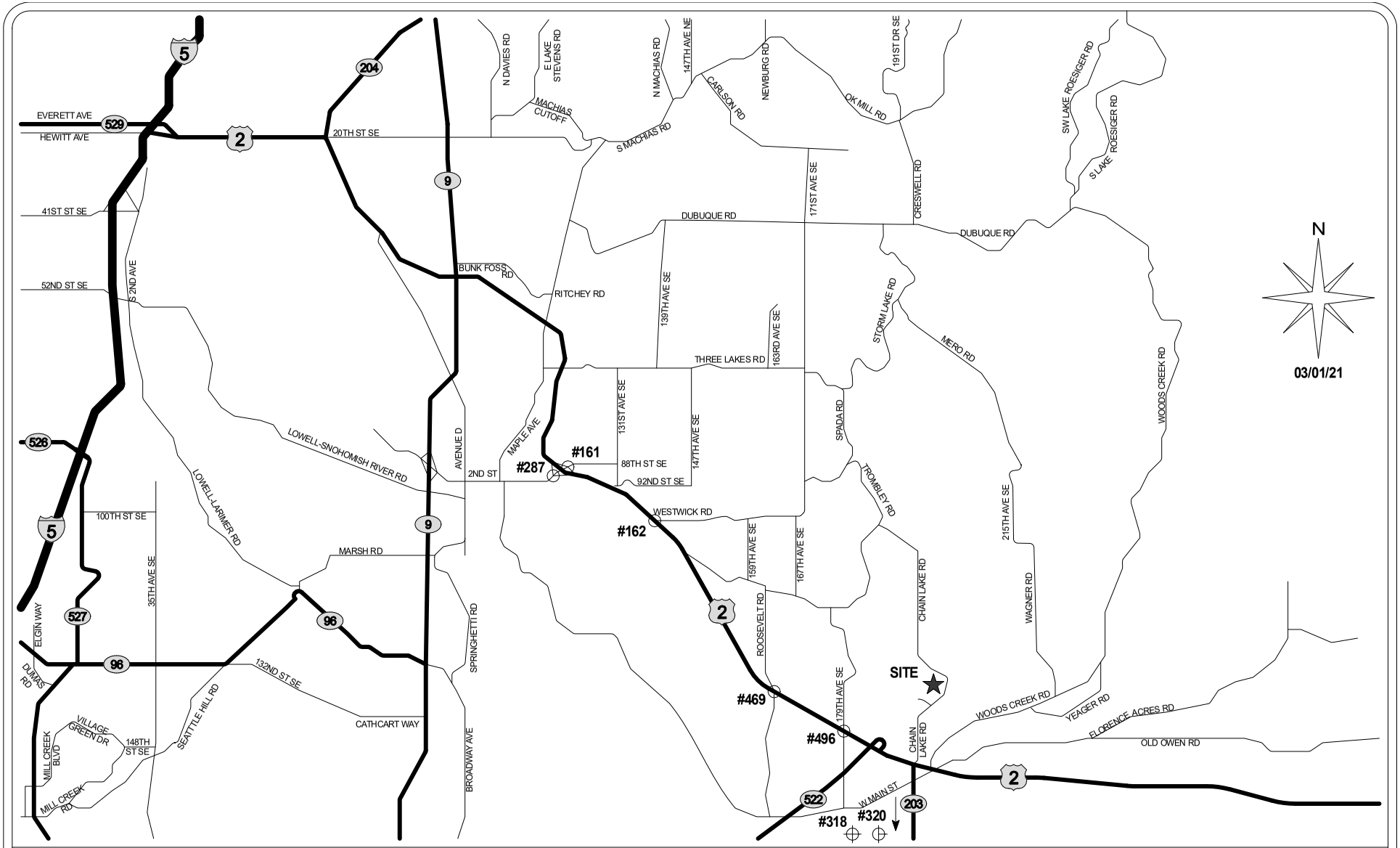
6.3 WSDOT

The City of Monroe and WSDOT have an interlocal agreement that provides for the payment of traffic mitigation fees. The interlocal agreement states that a development only has a "significant adverse impact" if the development contributes 25 or more trips to a WSDOT intersection. The WSDOT intersection impacted with more than 25 development trips is expected to operate at acceptable levels of service according to the interlocal agreement between the City of Monroe and WSDOT. WSDOT does not have a collection project for this intersection and therefore the WSDOT traffic mitigation fees should not be required for the Garibaldi development.

7. CONCLUSIONS

The Garibaldi development is proposed to consist of 90 single-family residential units with 4 existing units being removed. The 86 net new units of the Garibaldi development are anticipated to generate approximately 812 average daily trips with approximately 64 AM peak-hour trips and 85 PM peak-hour trips. The level of service analysis shows that the Chain Lake Road corridor will operate at LOS D and the intersection of Chain Lake Road at Kelsey Street will operate at LOS B, both of which meet City of Monroe standards. The Garibaldi development will have City of Monroe traffic mitigation fees of $307,020. The impacts of the development will not meet the thresholds for paying traffic mitigation fees to Snohomish County or WSDOT.

Snohomish County Key Intersection Impacts



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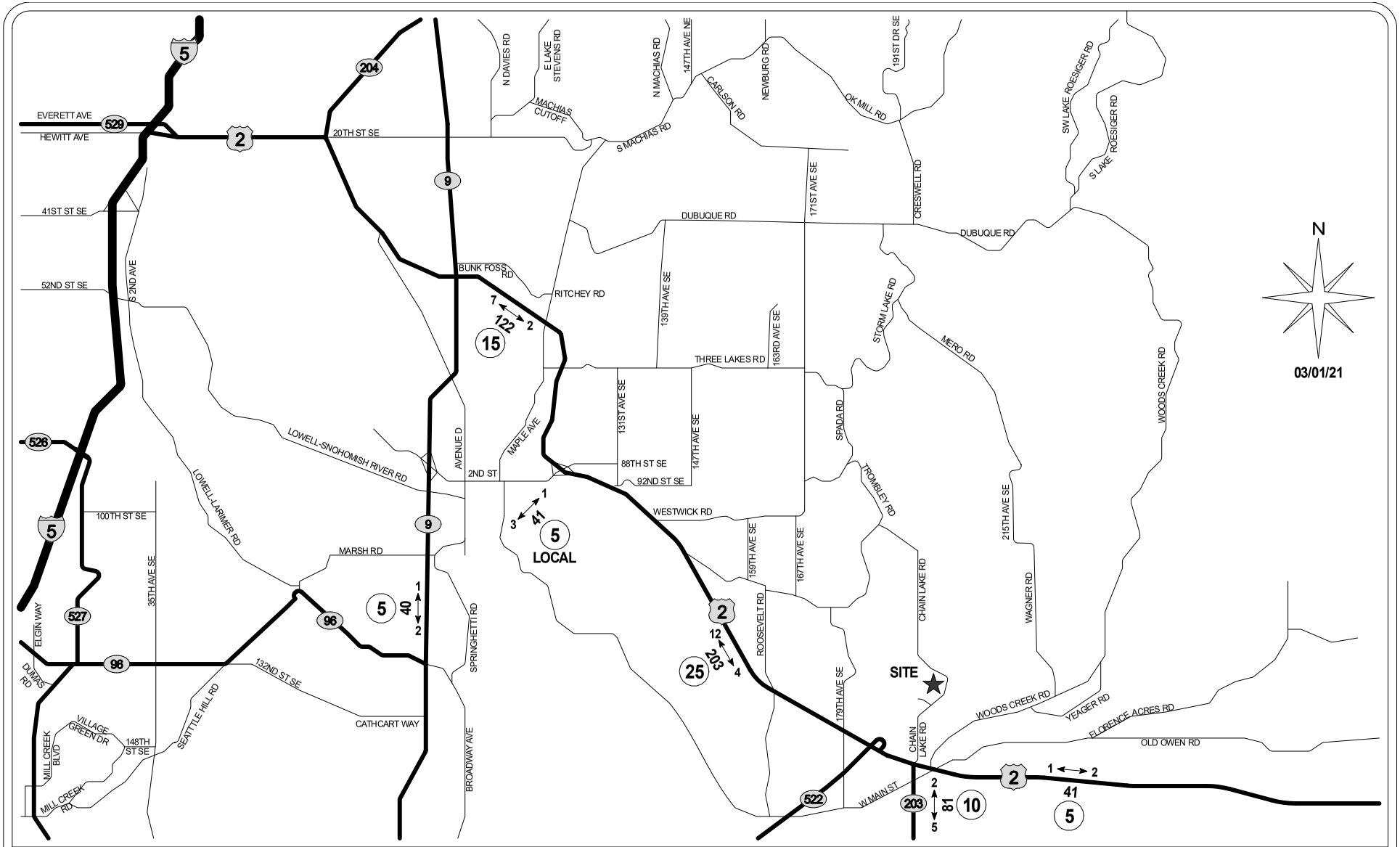
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★ DEVELOPMENT SITE

⊕ ### KEY INTERSECTION

FIGURE A1

KEY INTERSECTION LOCATIONS



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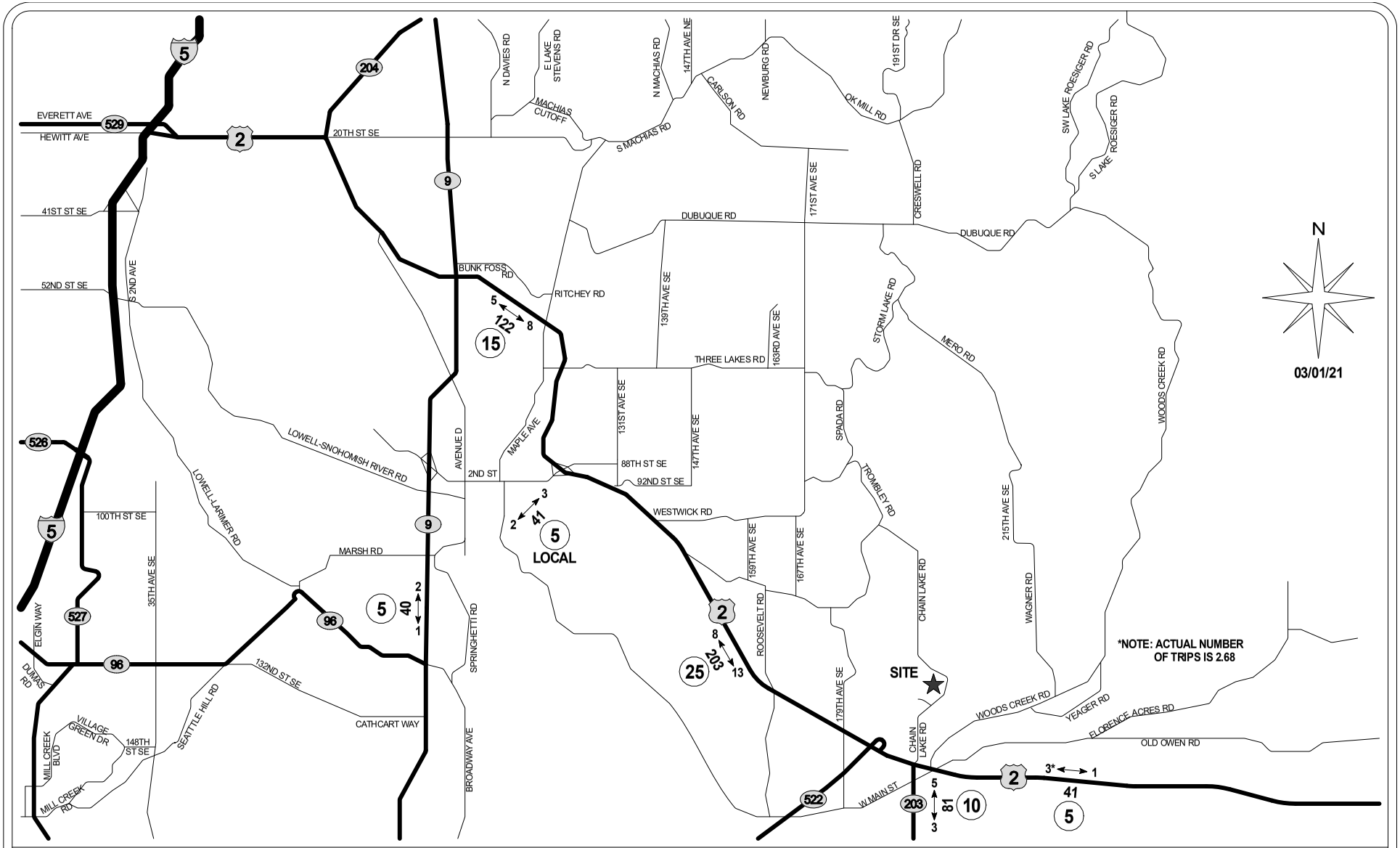
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AWDT
AM ◄► PEAK — NEW SITE TRAFFIC DAILY AND AM PEAK-HOUR

XX — TRIP DISTRIBUTION %

FIGURE A2

DEVELOPMENT TRIP DISTRIBUTION AM PEAK-HOUR



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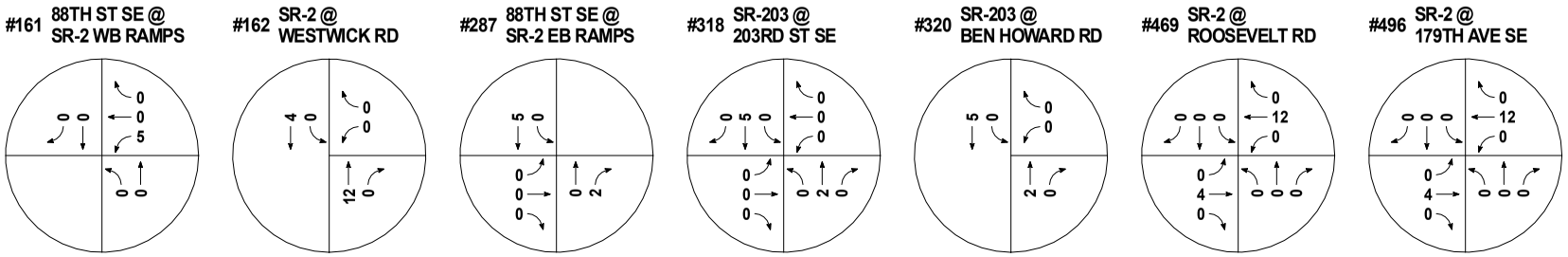
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AWDT
PM ◄► PEAK — NEW SITE TRAFFIC DAILY AND PM PEAK-HOUR

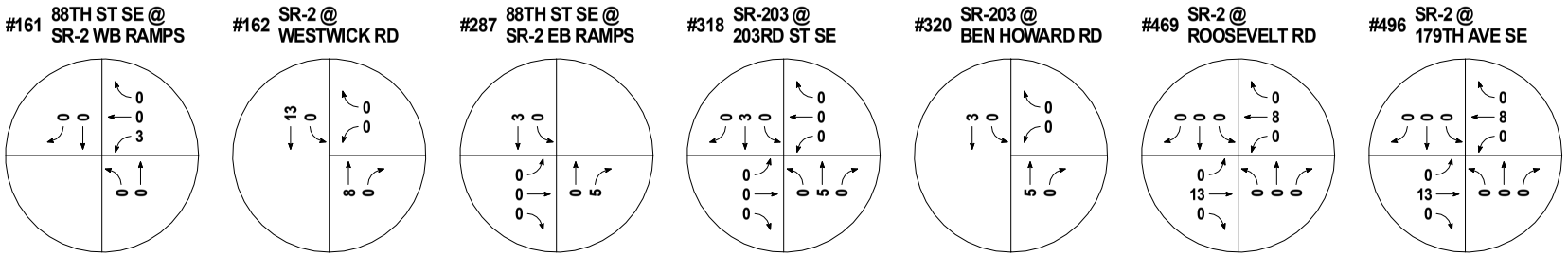
XX — TRIP DISTRIBUTION %

FIGURE A3

DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



AM PEAK-HOUR



PM PEAK-HOUR

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XXX→ PEAK HOUR TURNING MOVEMENT VOLUME

FIGURE A4

DEVELOPMENT KEY INTERSECTION VOLUMES AM & PM PEAK-HOURS

Key AM Peak-Hour Key Intersection Volumes

Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#161: 88th St SE at SR-2 WB Ramps	N/A	N/A	N/A	5	0	0	0	0	N/A	N/A	0	0
#162: SR-2 at Westwick Rd	N/A	N/A	N/A	0	N/A	0	N/A	12	0	0	5	N/A
#287: 88th St SE at SR-2 EB Ramps	0	0	0	N/A	N/A	N/A	N/A	0	2	0	5	N/A
#318: SR-203 at 203rd St SE	0	0	0	0	0	0	0	2	0	0	5	0
#320: SR-203 at Ben Howard Rd	N/A	N/A	N/A	0	N/A	0	N/A	2	0	0	5	N/A
#469: SR-2 at Roosevelt Rd	0	4	0	0	12	0	0	0	0	0	0	0
#496: SR-2 at 179th Ave SE	0	4	0	0	12	0	0	0	0	0	0	0

PM Peak-Hour Key Intersection Volumes

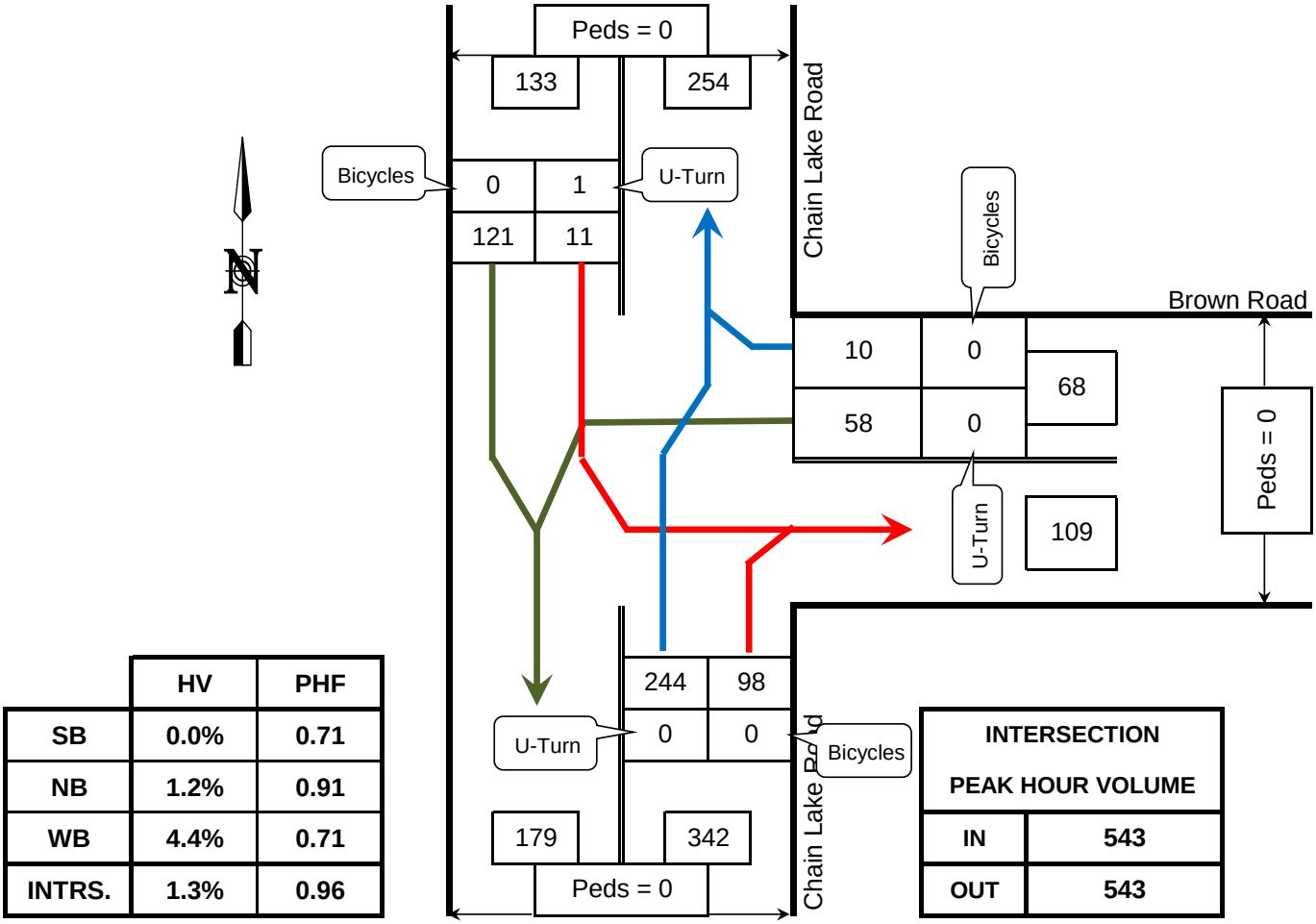
Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#161: 88th St SE at SR-2 WB Ramps	N/A	N/A	N/A	3	0	0	0	0	N/A	N/A	0	0
#162: SR-2 at Westwick Rd	N/A	N/A	N/A	0	N/A	0	N/A	8	0	0	13	N/A
#287: 88th St SE at SR-2 EB Ramps	0	0	0	N/A	N/A	N/A	N/A	0	5	0	3	N/A
#318: SR-203 at 203rd St SE	0	0	0	0	0	0	0	5	0	0	3	0
#320: SR-203 at Ben Howard Rd	N/A	N/A	N/A	0	N/A	0	N/A	5	0	0	3	N/A
#469: SR-2 at Roosevelt Rd	0	13	0	0	8	0	0	0	0	0	0	0
#496: SR-2 at 179th Ave SE	0	13	0	0	8	0	0	0	0	0	0	0

Turning Movement Calculations and Counts

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 PM - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM



	HV	PHF
SB	0.0%	0.71
NB	1.2%	0.91
WB	4.4%	0.71
INTRS.	1.3%	0.96

INTERSECTION PEAK HOUR VOLUME	
IN	543
OUT	543

HV = Heavy Vehicles
PHF = Peak Hour Factor

Chain Lake Road @ Brown Road

Monroe, WA

COUNTED BY: VT/CN

REDUCED BY: CN

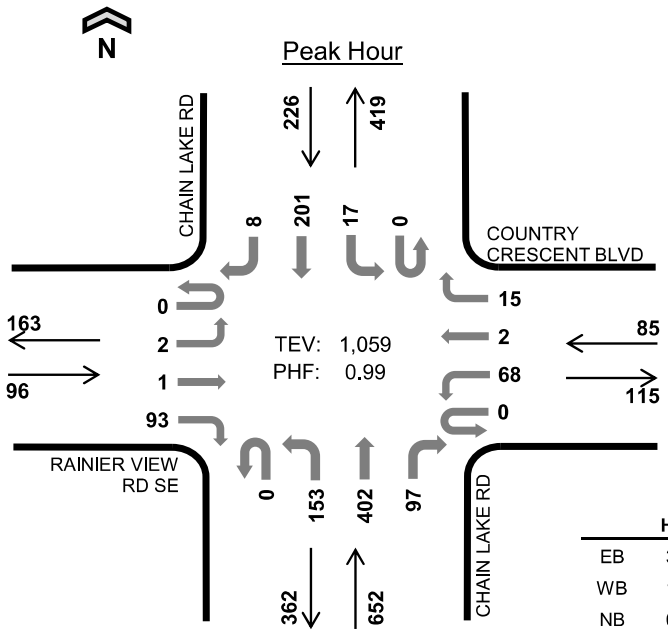
REDUCTION DATE: Tue. 2/6/18

DATE OF COUNT: Wed. 1/31/18

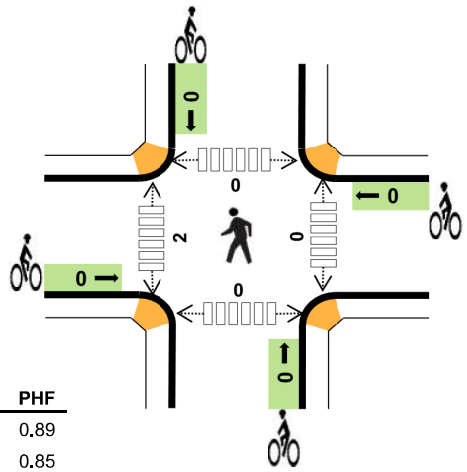
TIME OF COUNT: 4:00 PM - 6:00 PM

WEATHER: Rainy

CHAIN LAKE RD
COUNTRY CRESCENT BLVD



Date: Thu, Sep 27, 2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	3.1%	0.89
WB	1.2%	0.85
NB	0.5%	0.92
SB	0.4%	0.91
TOTAL	0.8%	0.99

Two-Hour Count Summaries

Interval Start	RAINIER VIEW RD SE				COUNTRY CRESCENT BLVD				CHAIN LAKE RD				CHAIN LAKE RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	3	3	23	0	11	0	1	0	39	87	15	0	4	36	4	226	0
4:15 PM	0	1	1	24	1	14	2	5	0	35	95	22	0	2	55	2	259	0
4:30 PM	0	4	1	29	0	16	0	3	0	31	86	17	0	1	63	1	252	0
4:45 PM	0	1	0	22	0	18	2	2	0	35	68	23	0	5	48	1	225	962
5:00 PM	**0**	**0**	**0**	**19**	**0**	**13**	**1**	**3**	**0**	**40**	**106**	**32**	**0**	**2**	**47**	**2**	**265**	1,001
5:15 PM	**0**	**1**	**0**	**23**	**0**	**21**	**1**	**3**	**0**	**35**	**104**	**20**	**0**	**5**	**53**	**2**	**268**	1,010
5:30 PM	**0**	**0**	**1**	**25**	**0**	**15**	**0**	**4**	**0**	**38**	**100**	**24**	**0**	**6**	**45**	**2**	**260**	1,018
5:45 PM	**0**	**1**	**0**	**26**	**0**	**19**	**0**	**5**	**0**	**40**	**92**	**21**	**0**	**4**	**56**	**2**	**266**	**1,059**
Count Total	0	11	6	191	1	127	6	26	0	293	738	174	0	29	403	16	2,021	0
Peak Hour	**0**	**2**	**1**	**93**	**0**	**68**	**2**	**15**	**0**	**153**	**402**	**97**	**0**	**17**	**201**	**8**	**1,059**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

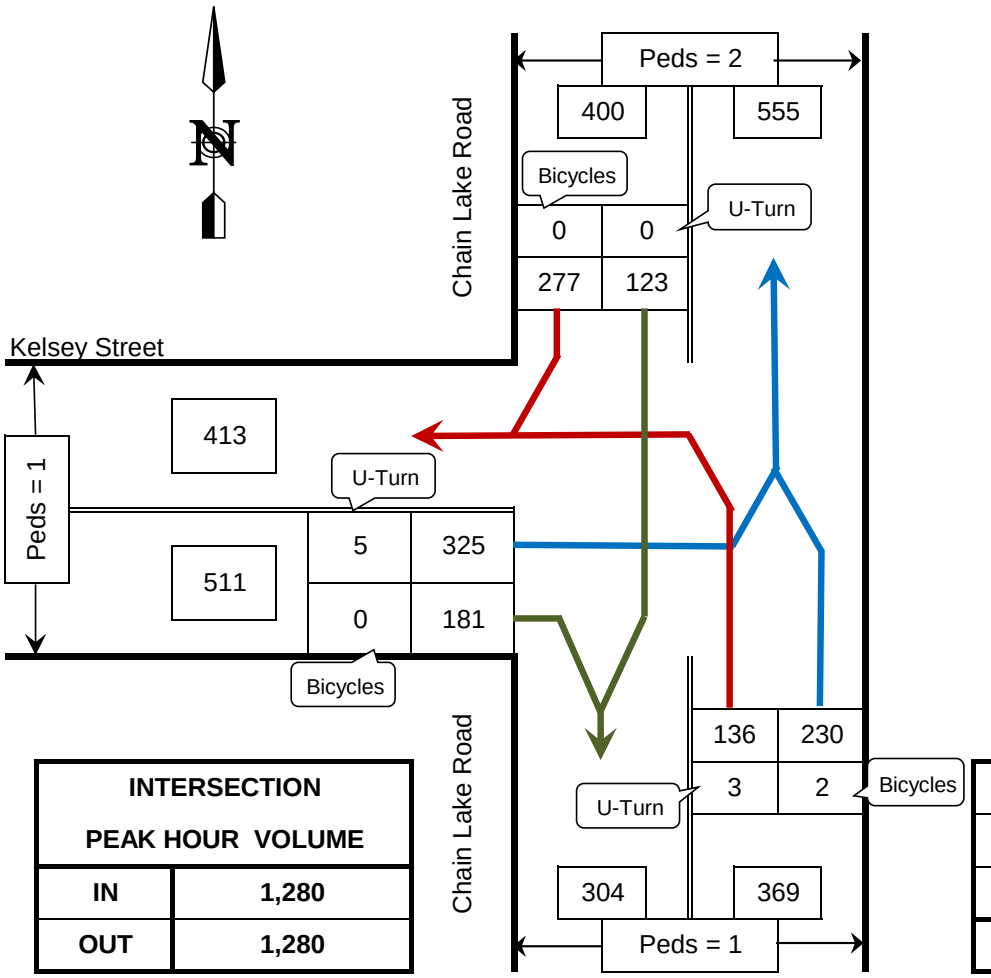
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	5	1	*6*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	3	0	3	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	1	0	2	3	*6*	0	0	0	0	*0*	0	2	0	0	*2*
4:45 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	4	0	0	*4*
5:00 PM	**1**	**0**	**1**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:30 PM	**0**	**1**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
5:45 PM	**1**	**0**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	7	1	14	5	*27*	0	0	0	0	*0*	0	8	0	0	*8*
Peak Hour	**3**	**1**	**3**	**1**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	**2**

Mark Skaggs: (425) 250-0777 mark.skaggs@idaxdata.com

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 PM - 6:00 PM PEAK HOUR: 4:00 PM TO 5:00 PM



INTERSECTION PEAK HOUR VOLUME	
IN	1,280
OUT	1,280

	HV	PHF
SB	2.8%	0.88
NB	4.6%	0.92
EB	2.0%	0.90
INTRS.	3.0%	0.93

HV = Heavy Vehicles
PHF = Peak Hour Factor

Chain Lake Road @ Kelsey Street

Monroe, WA

COUNTED BY: VT

REDUCED BY: CN

REDUCTION DATE: Fri. 3/9/18

DATE OF COUNT: Wed. 3/7/18

TIME OF COUNT: 4:00 PM - 6:00 PM

WEATHER: Overcast

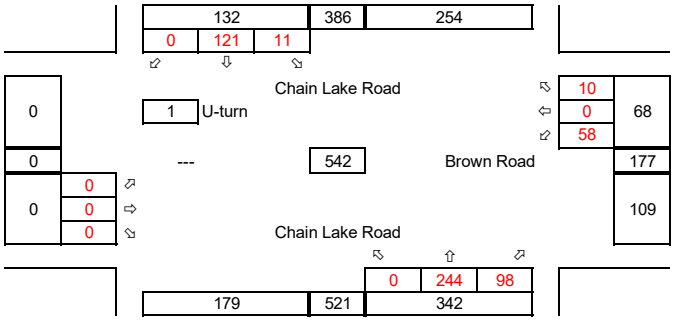
1 Brown Rd @ Chain Lake Rd

Synchro ID: 1

Existing
Average Weekday
PM Peak Hour

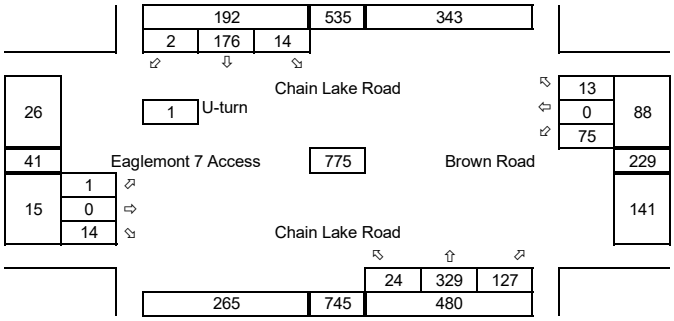
Year: **1/31/18**

Data Source: **TDG**

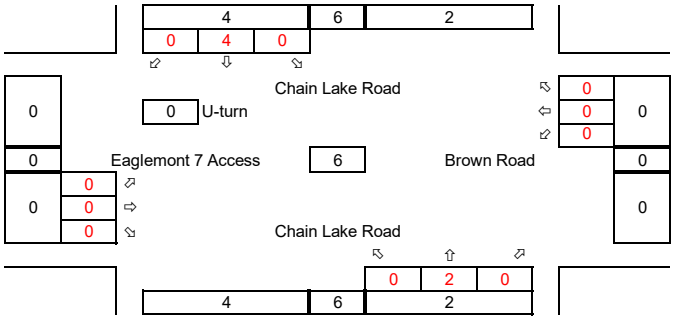


Future without Project
Average Weekday
PM Peak Hour

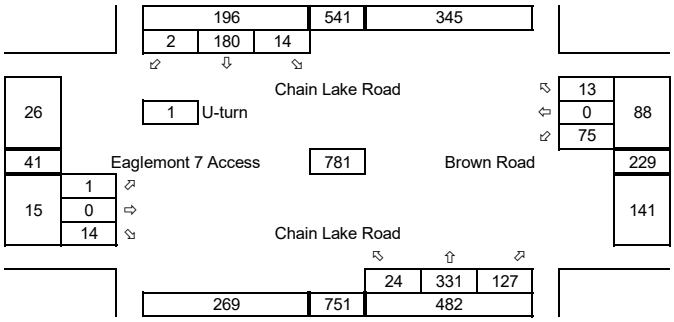
Year: 2031
Growth Rate = 2.0%
Years of Growth = 13
Total Growth = 1.2936



Total Project Trips
Average Weekday
PM Peak Hour

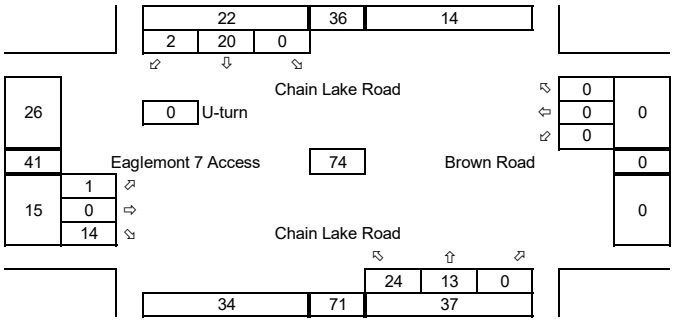


Future with Project
Average Weekday
PM Peak Hour



Pipeline Trips
Average Weekday
PM Peak Hour

Eaglemont 1-7
Easton Cove
Sweetbriar
Skycroft
Clothier Short Plat
Woods Creek Highlands
Kestrel Ridge



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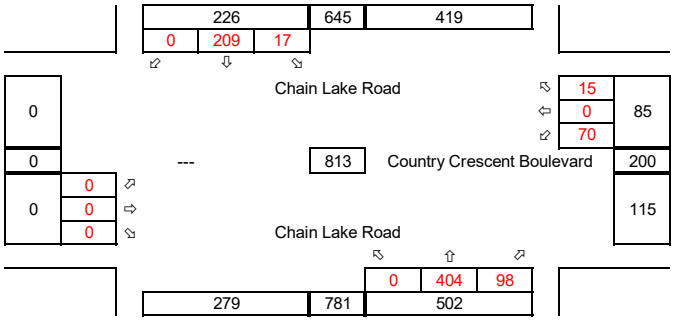
2 Country Crescent @ Chain Lake

Synchro ID: 2

Existing
Average Weekday
PM Peak Hour

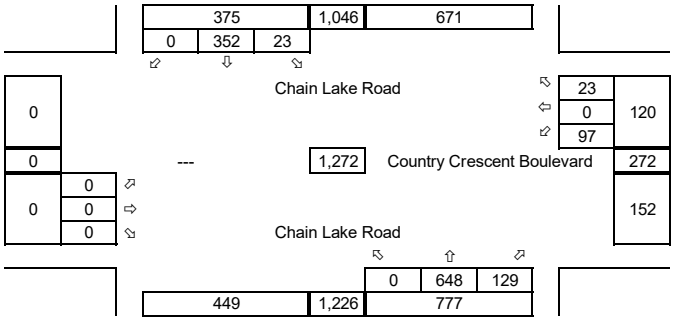
Year: **9/27/18**

Data Source: **Idax**

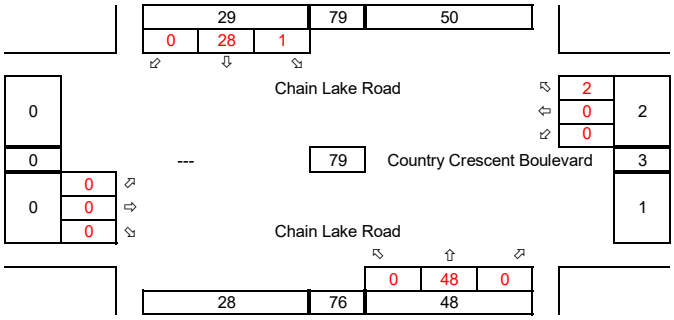


Future without Project
Average Weekday
PM Peak Hour

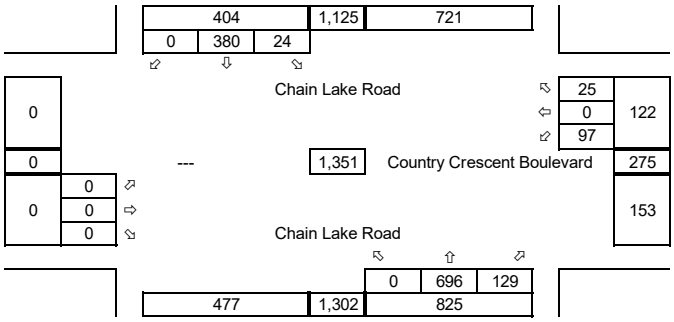
Year: 2031
Growth Rate = 2.0%
Years of Growth = 13
Total Growth = 1.2936



Total Project Trips
Average Weekday
PM Peak Hour

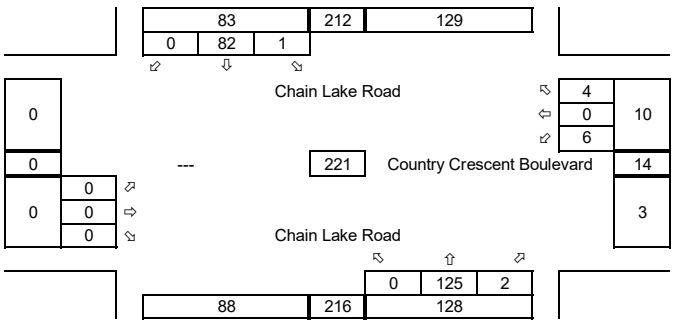


Future with Project
Average Weekday
PM Peak Hour



Pipeline Trips
Average Weekday
PM Peak Hour

Eaglemont 1-7
Easton Cove
Sweetbriar
Skycroft
Clothier Short Plat
Woods Creek Highlands
Kestrel Ridge



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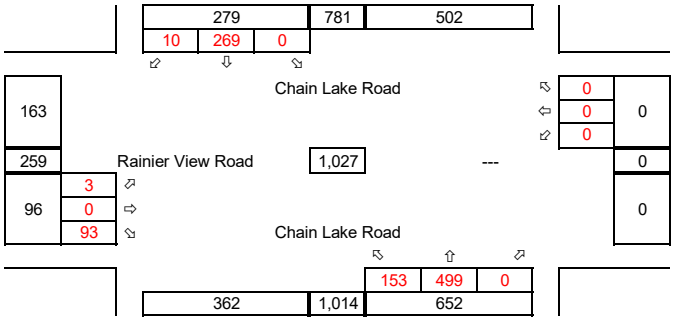
3 Rainier View @ Chain Lake

Synchro ID: 3

Existing
Average Weekday
PM Peak Hour

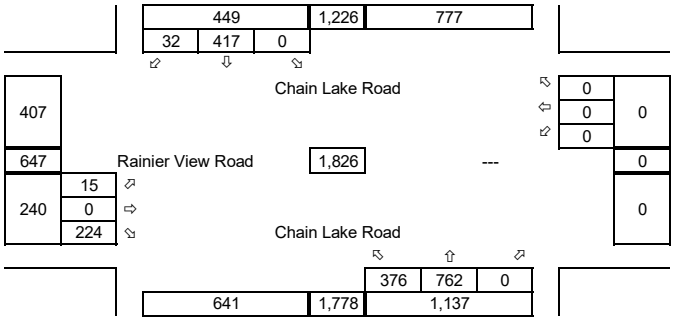
Year: **1/31/18**

Data Source: **TDG**

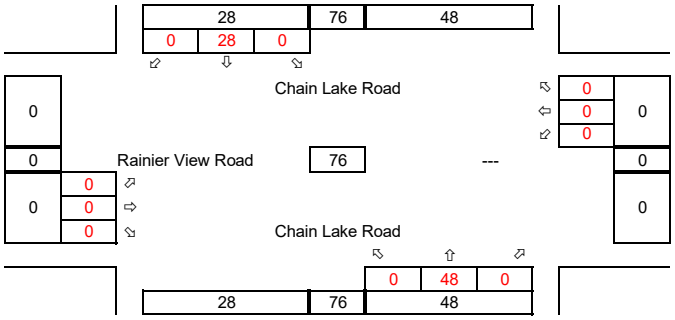


Future without Project
Average Weekday
PM Peak Hour

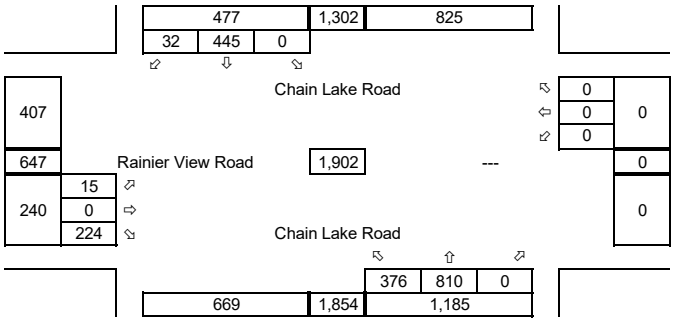
Year: 2031
Growth Rate = 2.0%
Years of Growth = 13
Total Growth = 1.2936



Total Project Trips
Average Weekday
PM Peak Hour

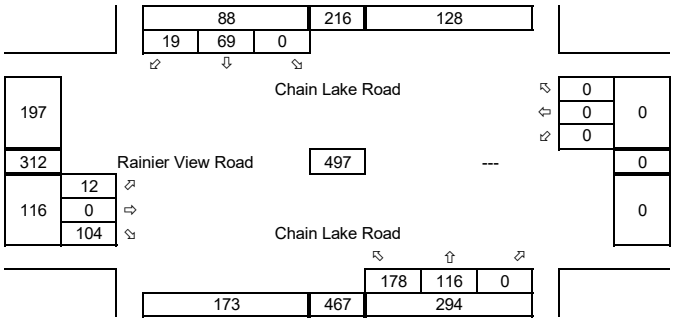


Future with Project
Average Weekday
PM Peak Hour



Pipeline Trips
Average Weekday
PM Peak Hour

Eaglemont 1-7
Easton Cove
Sweetbriar
Skycroft
Clothier Short Plat
Woods Creek Highlands
Kestrel Ridge



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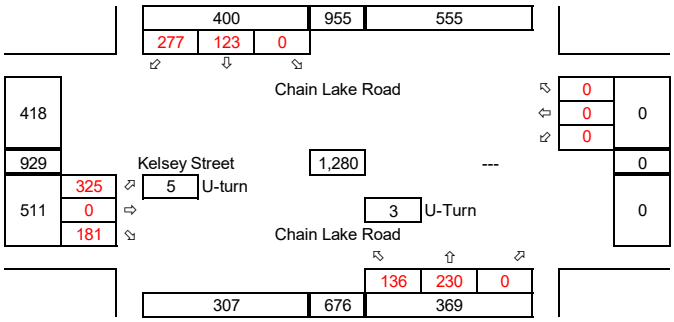
4 Kelsey St @ Chain Lake Rd

Synchro ID: 4

Existing
Average Weekday
PM Peak Hour

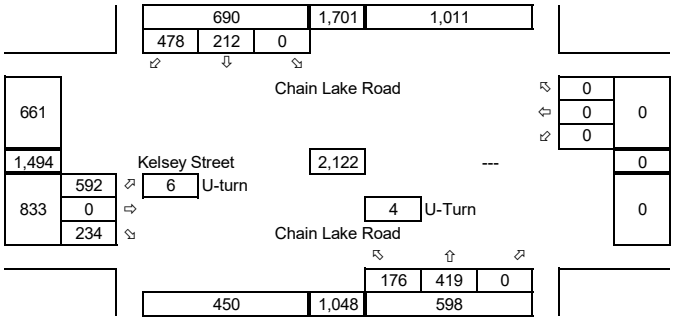
Year: **3/7/18**

Data Source: **TDG**

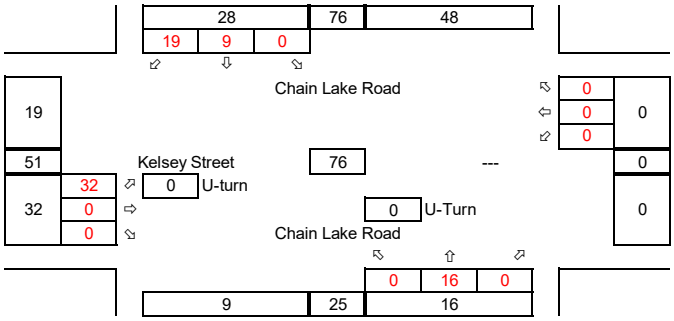


Future without Project
Average Weekday
PM Peak Hour

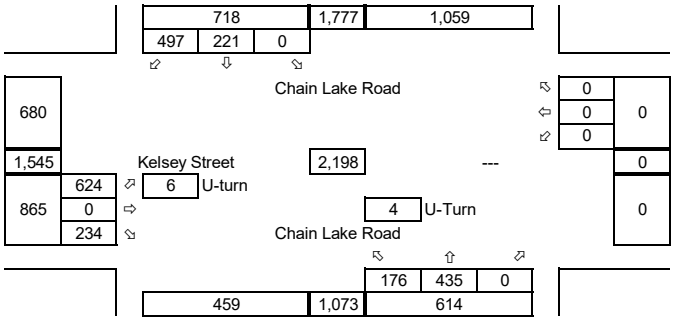
Year: 2031
Growth Rate = 2.0%
Years of Growth = 13
Total Growth = 1.2936



Total Project Trips
Average Weekday
PM Peak Hour

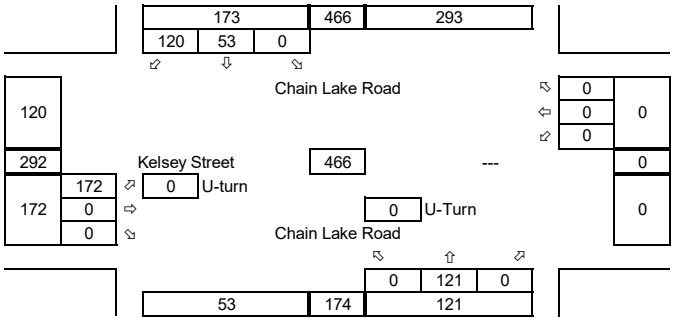


Future with Project
Average Weekday
PM Peak Hour



Pipeline Trips
Average Weekday
PM Peak Hour

Eaglemont 1-7
Easton Cove
Sweetbriar
Skycroft
Clothier Short Plat
Woods Creek Highlands
Kestrel Ridge



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5 Site Access @ Chain Lake Rd

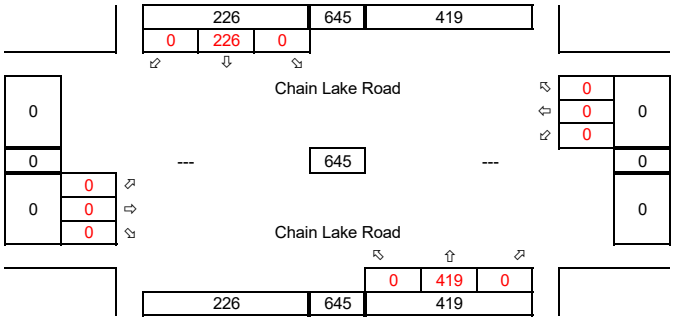
Synchro ID: 5

Existing
Average Weekday
PM Peak Hour

Year: **1/31/18**

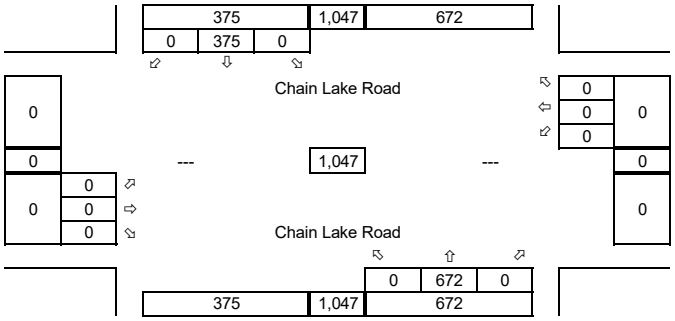
Data Source: **GTC**

Volumes extrapolated from the north leg of Country Crescent Blvd at Chain Lake Rd.

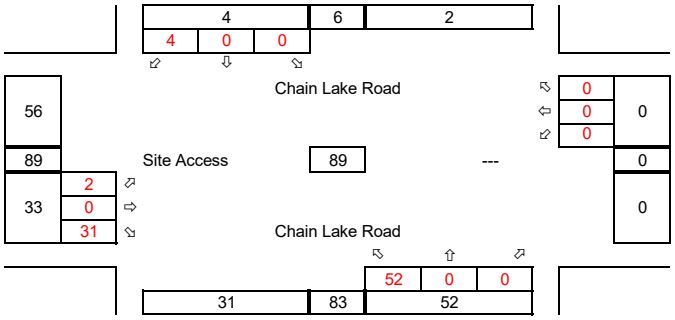


Future without Project
Average Weekday
PM Peak Hour

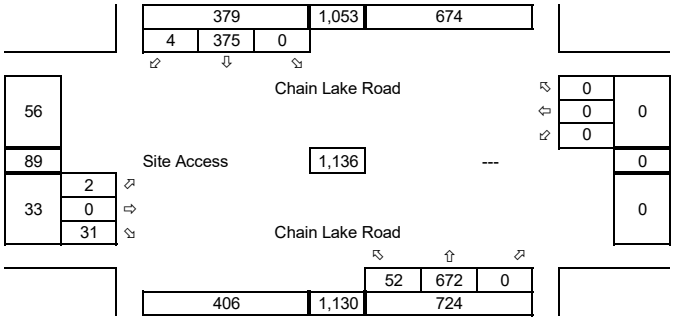
Year: 2031
Growth Rate = 2.0%
Years of Growth = 13
Total Growth = 1.2936



Total Project Trips
Average Weekday
PM Peak Hour

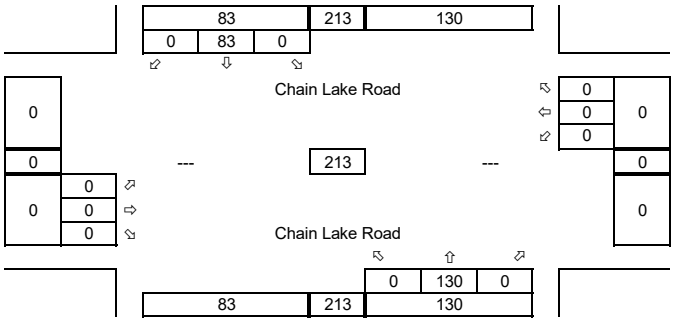


Future with Project
Average Weekday
PM Peak Hour

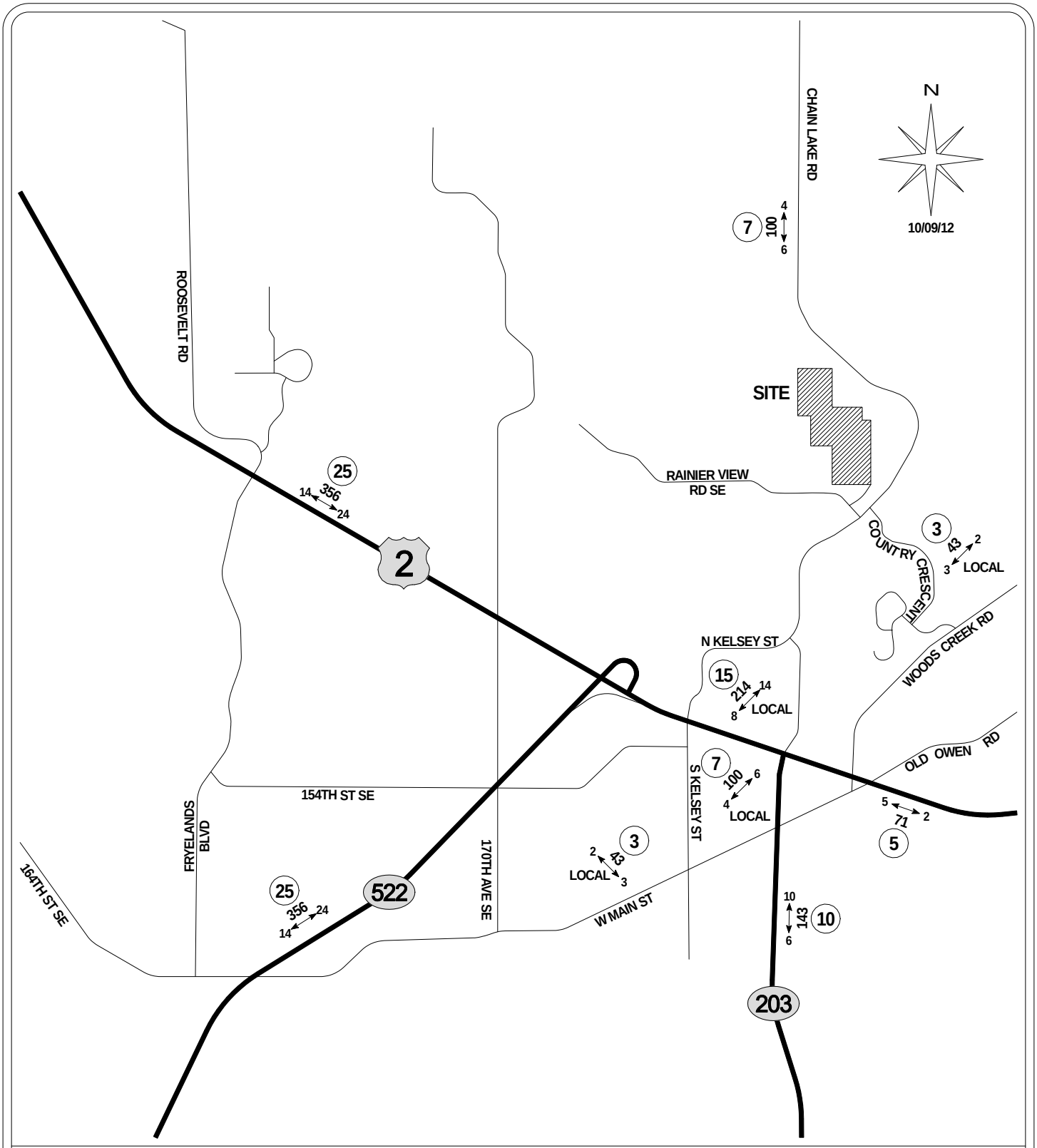


Pipeline Trips
Average Weekday
PM Peak Hour

Eaglemont 1-7
Easton Cove
Sweetbriar
Skycroft
Clothier Short Plat
Woods Creek Highlands
Kestrel Ridge



Pipeline Information



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #12-087

EAGLEMONT
149 SINGLE-FAMILY UNITS

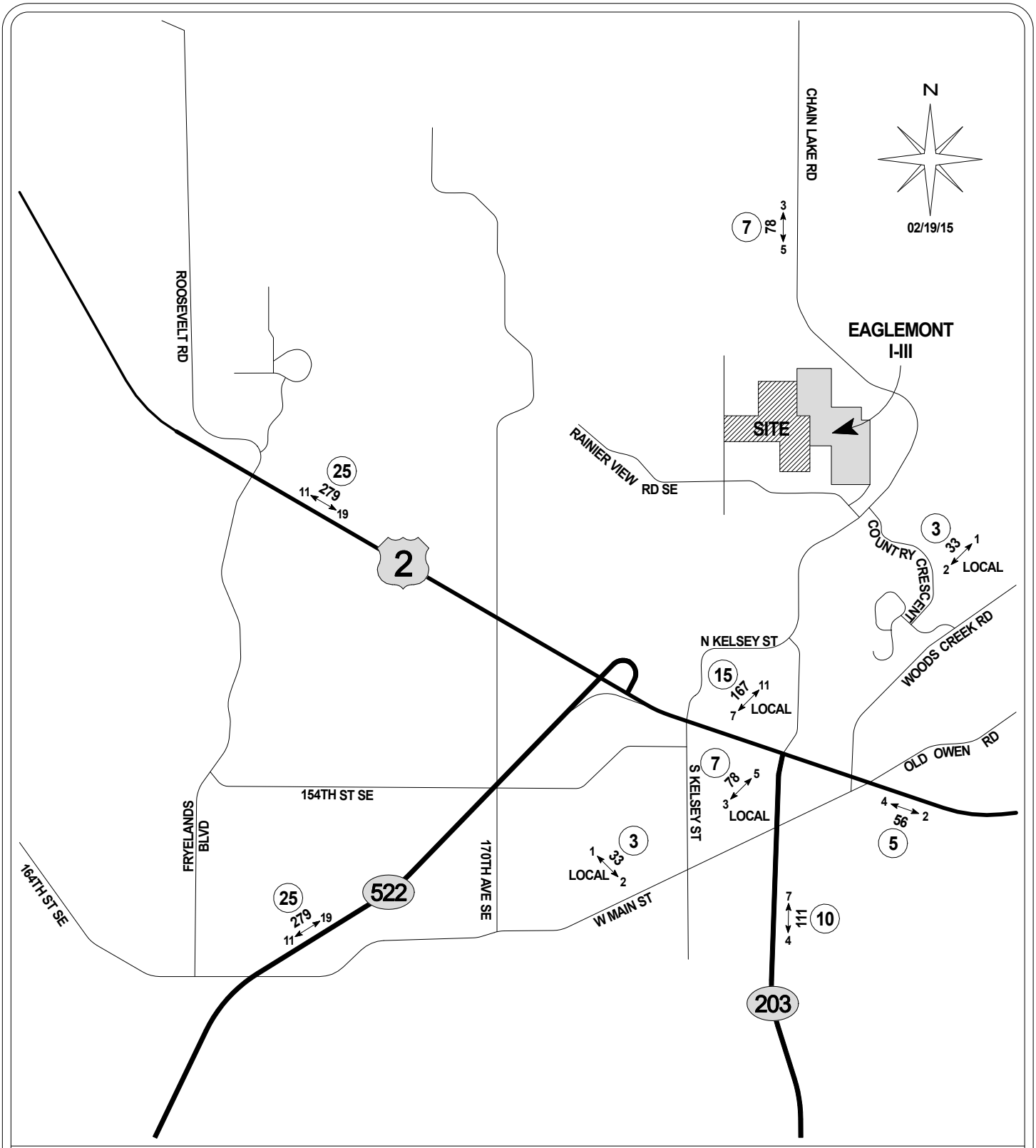
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(25) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #15-045

EAGLEMONT IV-VIII
117 NEW SINGLE-FAMILY UNITS

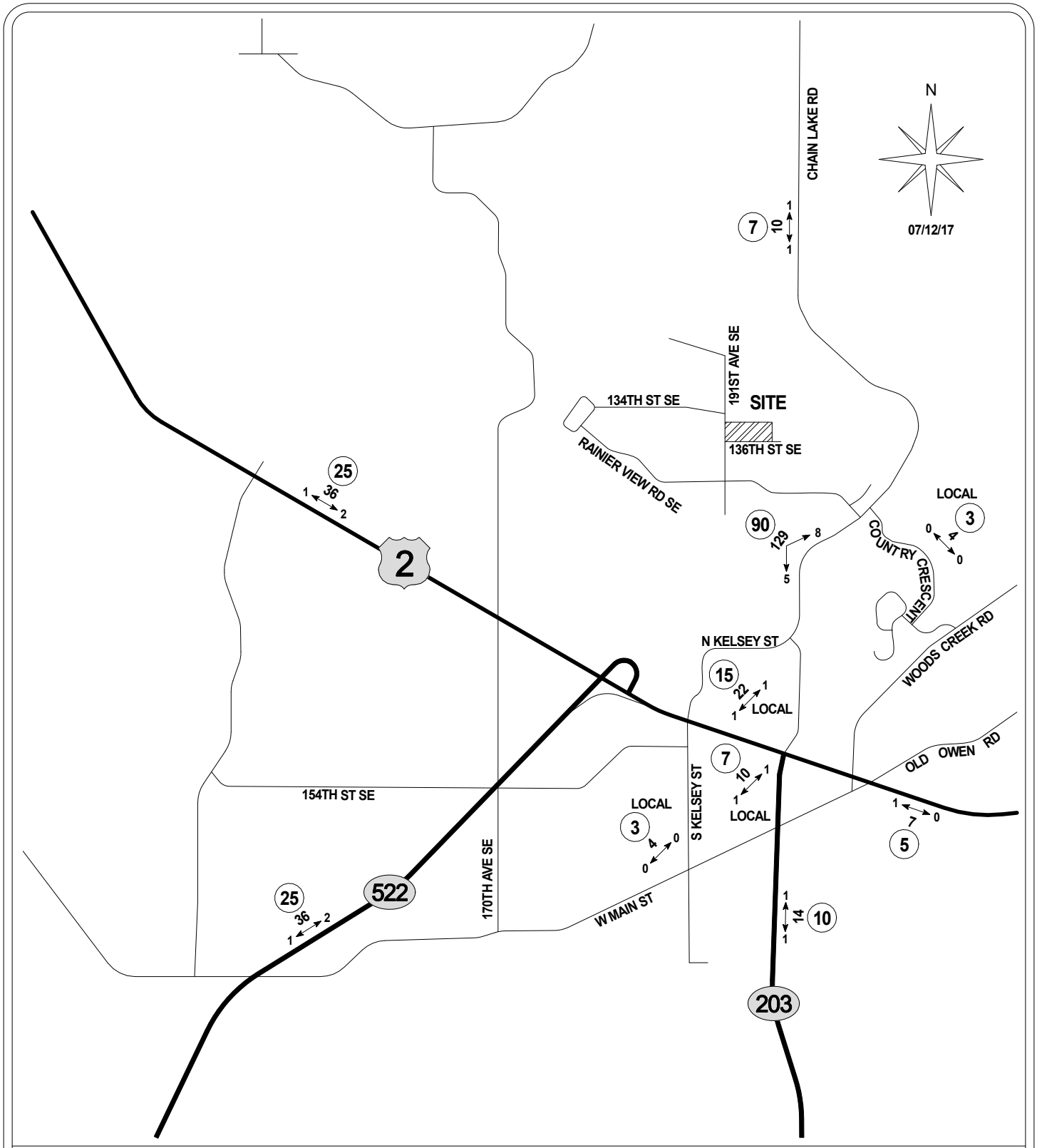
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #17-130

EAGLEMONT 5
15 NEW SINGLE FAMILY DWELLINGS

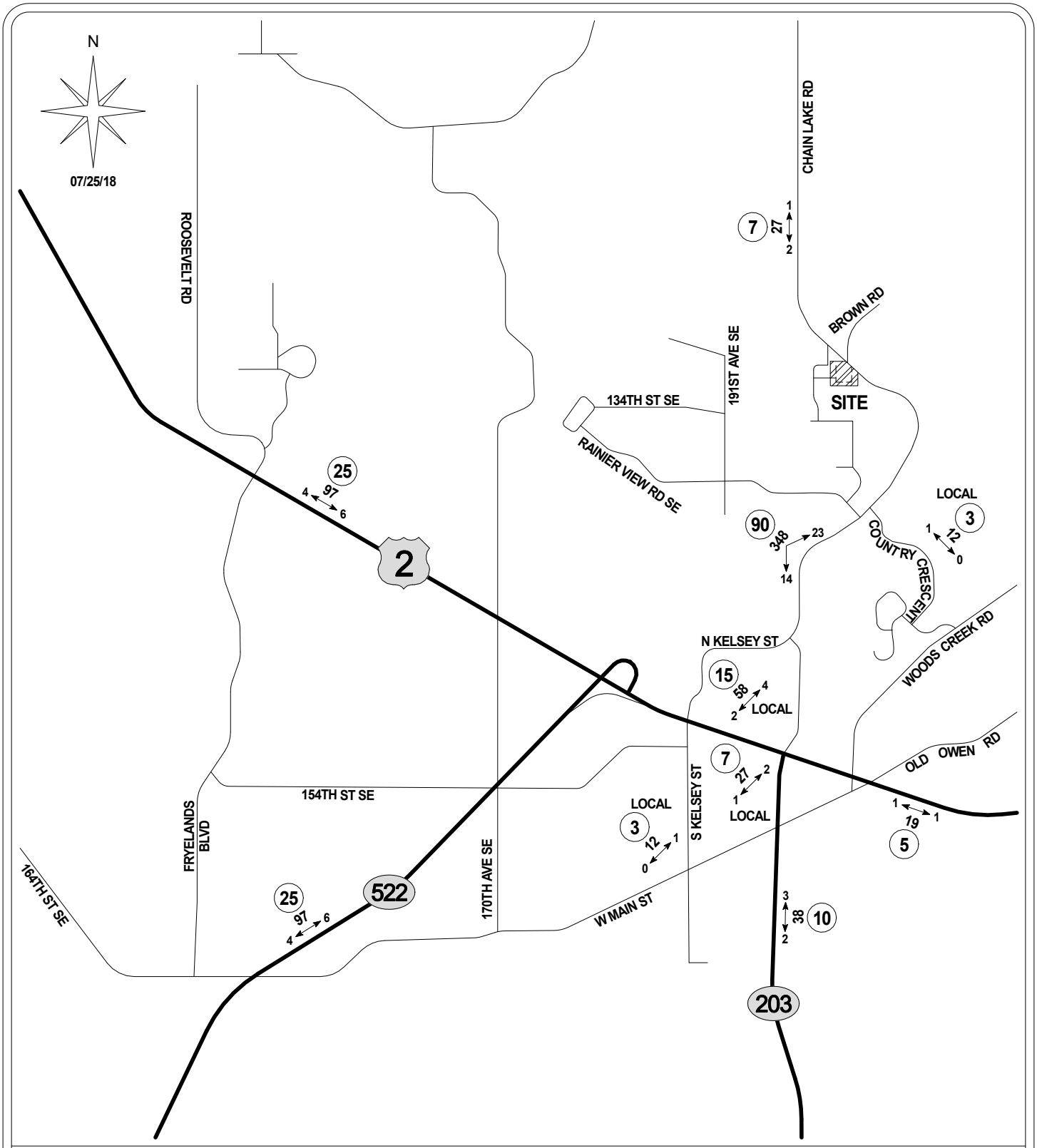
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #18-042

EAGLEMONT 7
41 NEW SINGLE FAMILY DWELLINGS

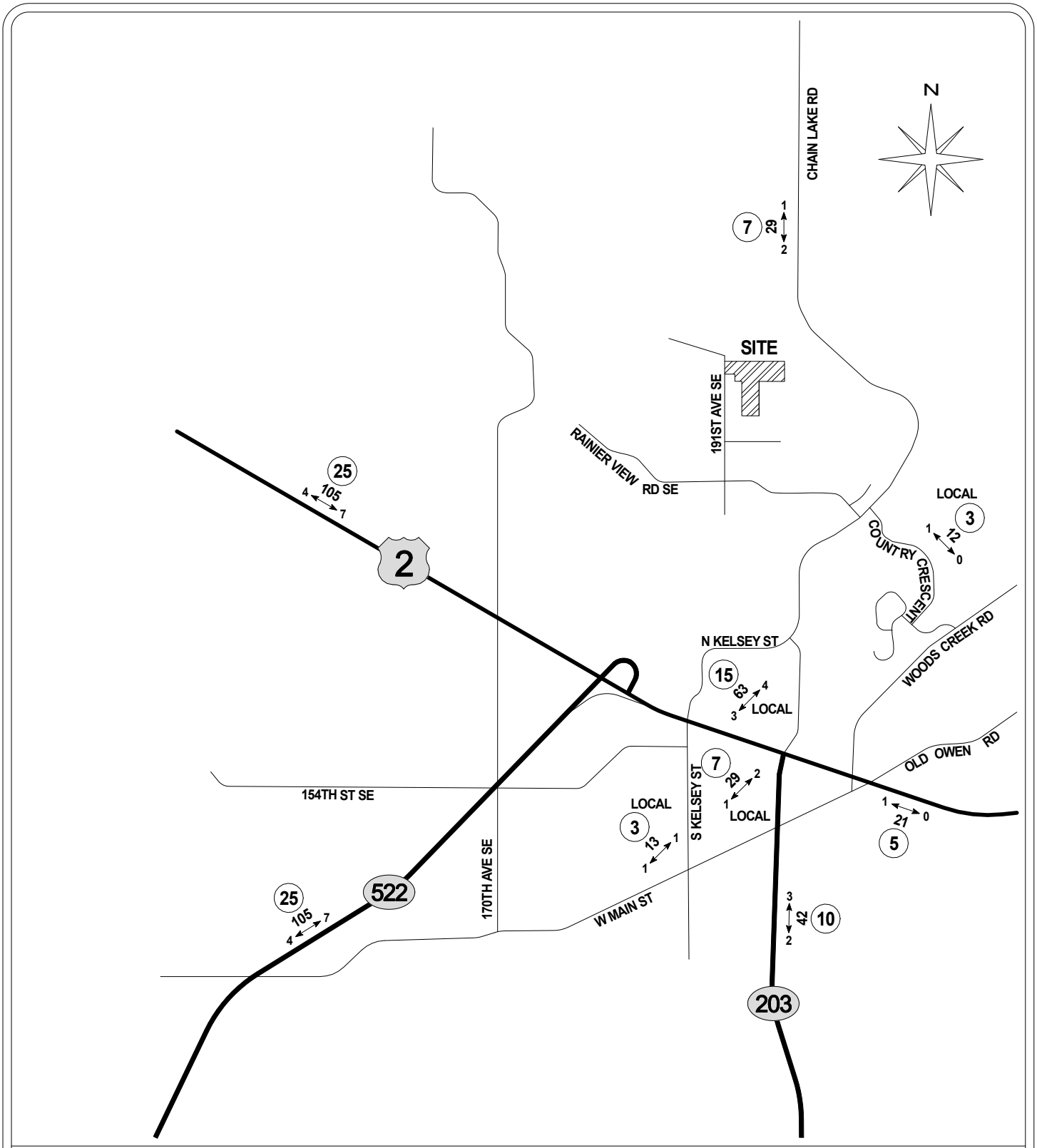
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #15-244

SKY VIEW RIDGE
44 NEW SINGLE-FAMILY UNITS

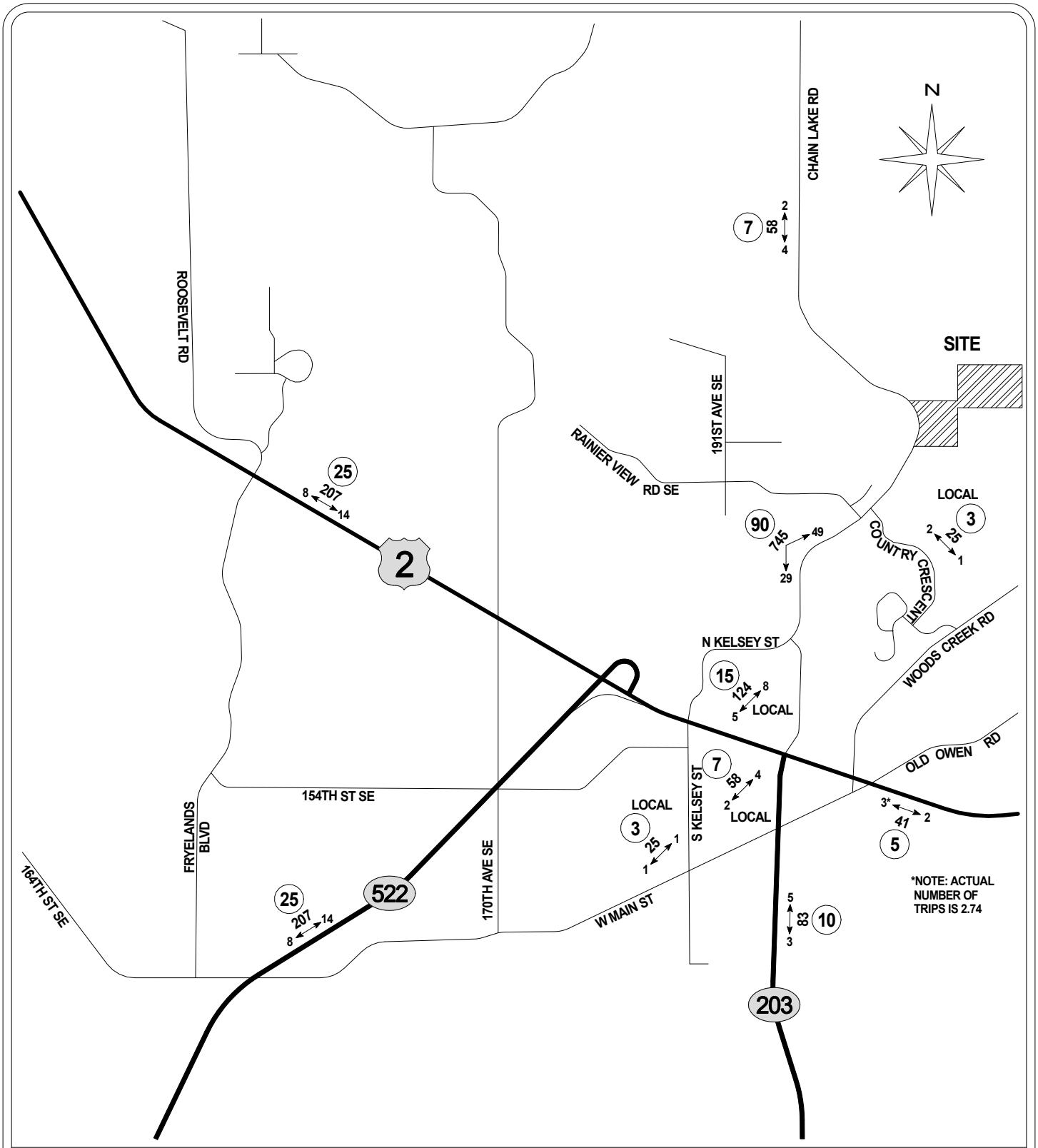
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 2
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #16-030

KLIER DEVELOPMENT
87 NEW SINGLE FAMILY DWELLINGS

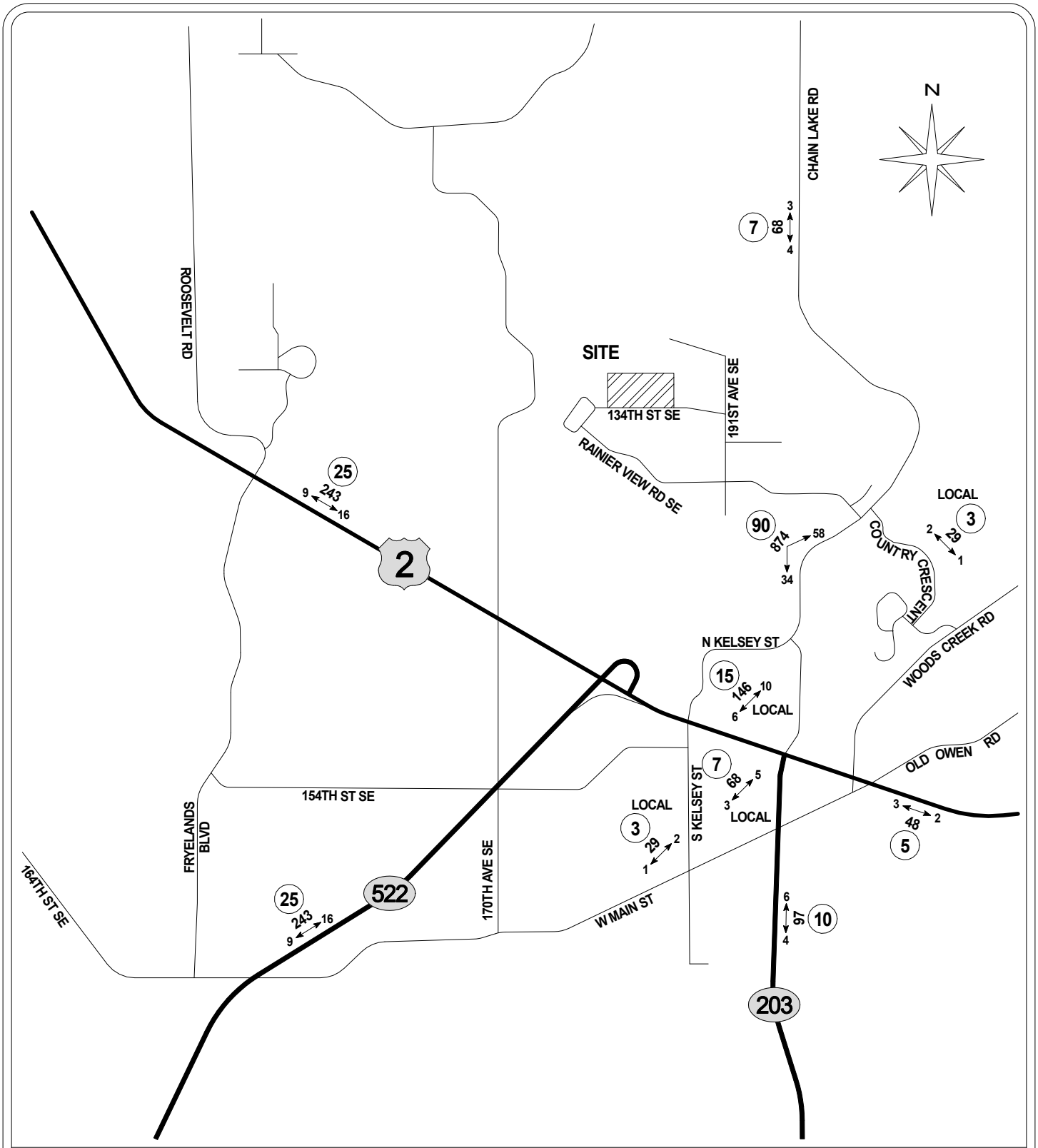
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #16-171

WORTHINGTON HEIGHTS
106 SINGLE FAMILY DWELLINGS

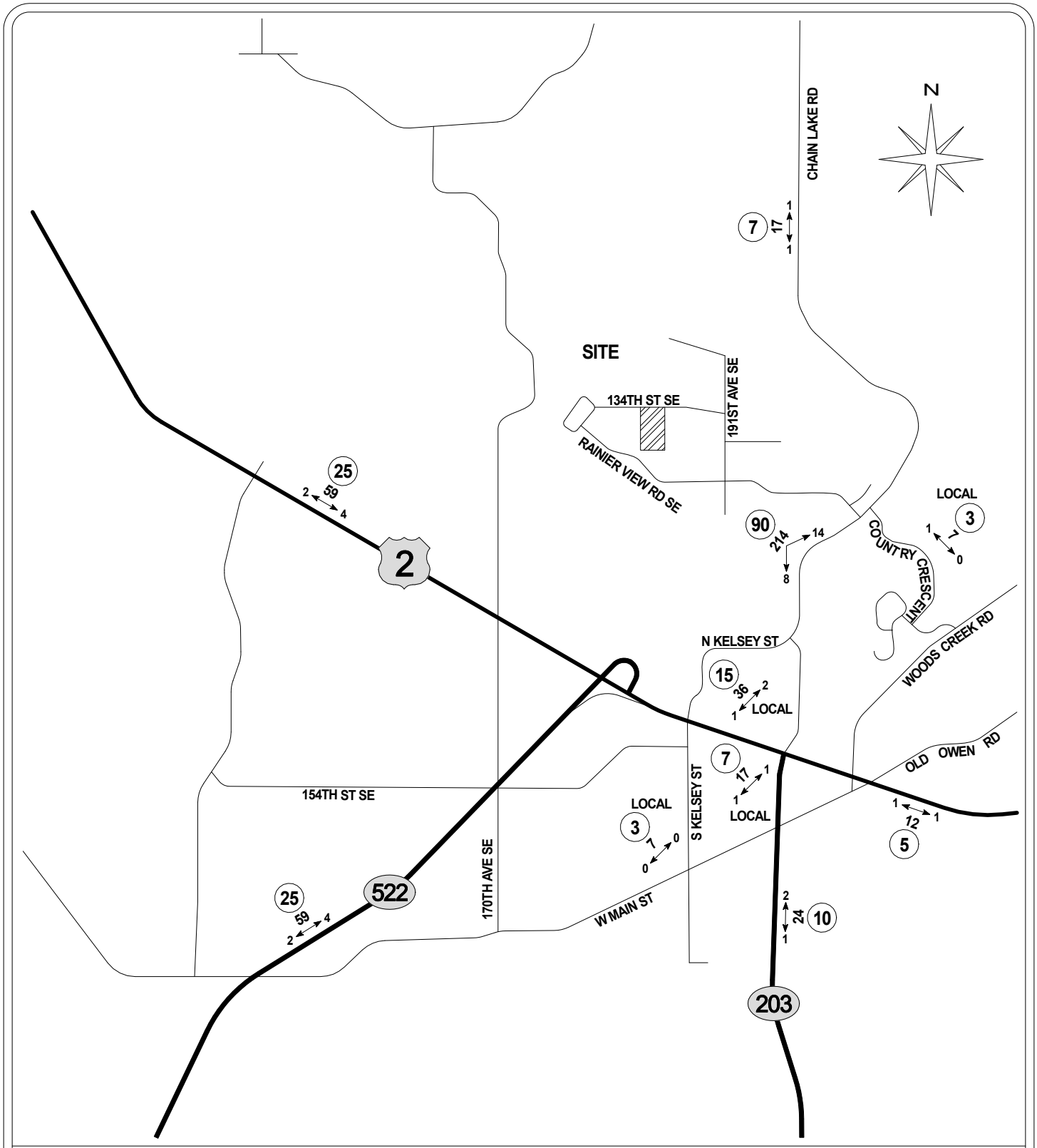
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #16-165

RASPBERRY HILL
25 NEW SINGLE FAMILY DWELLINGS

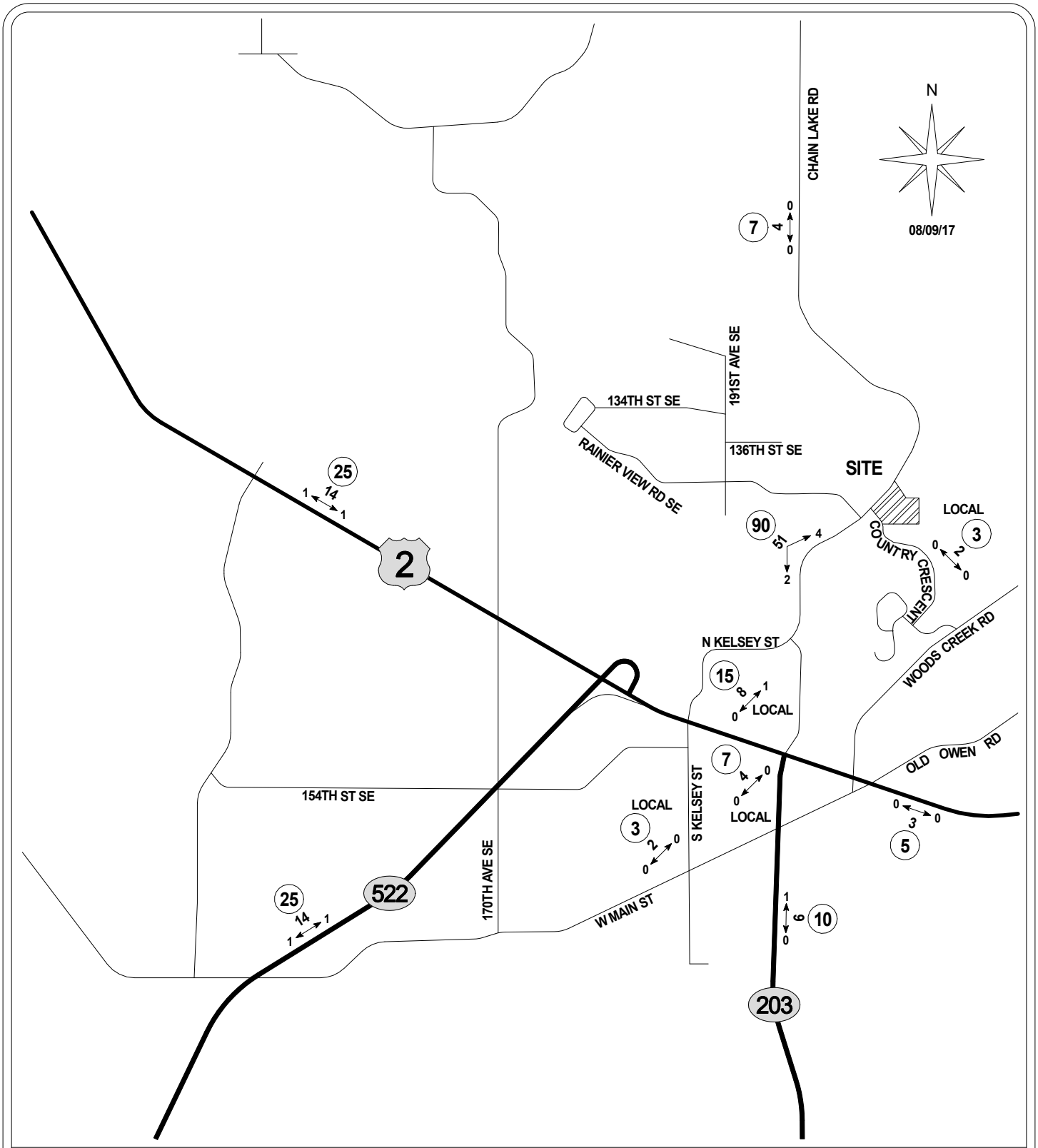
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #17-167

CLOTHIER SHORT PLAT
6 NEW SINGLE FAMILY DWELLINGS

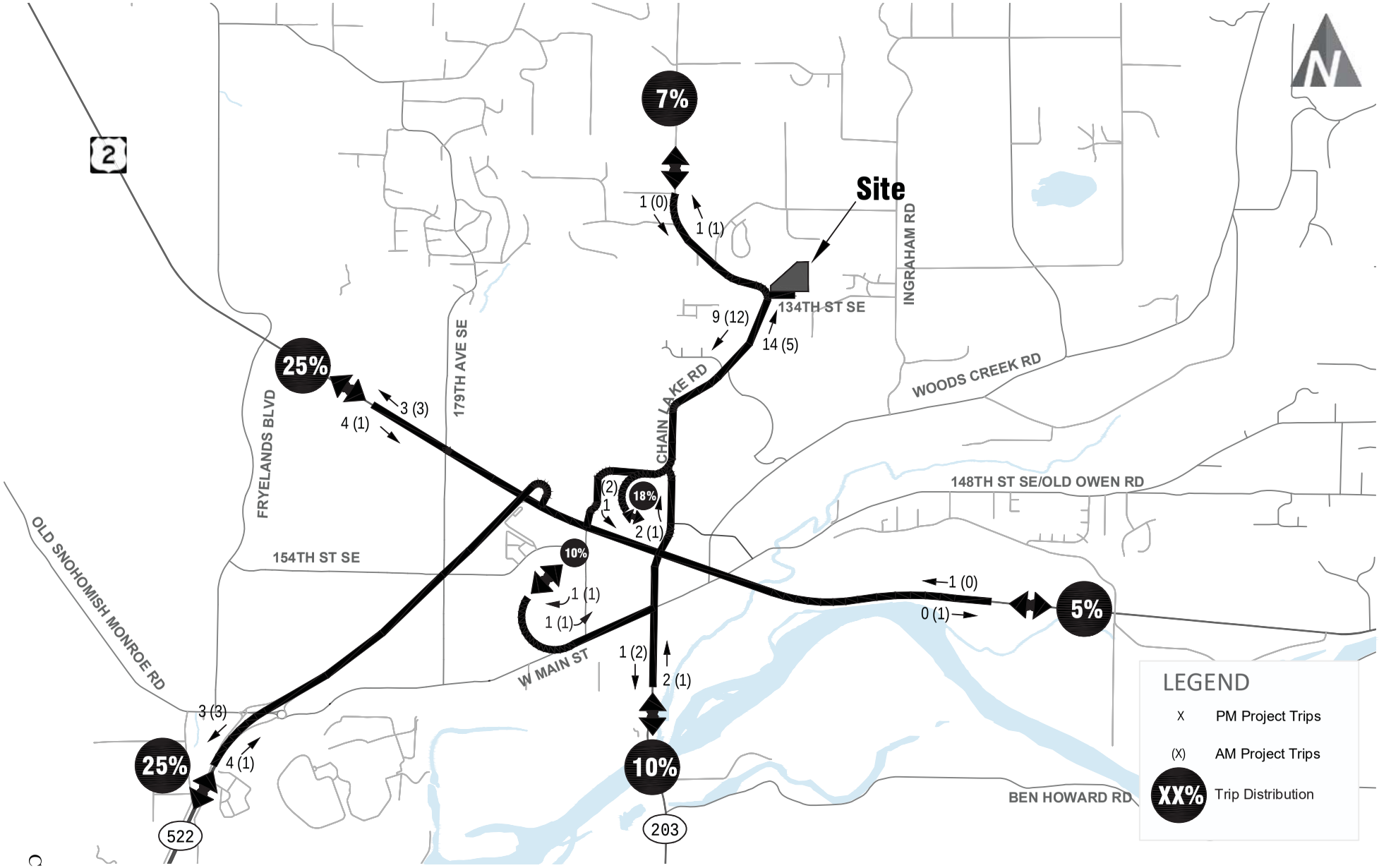
CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR



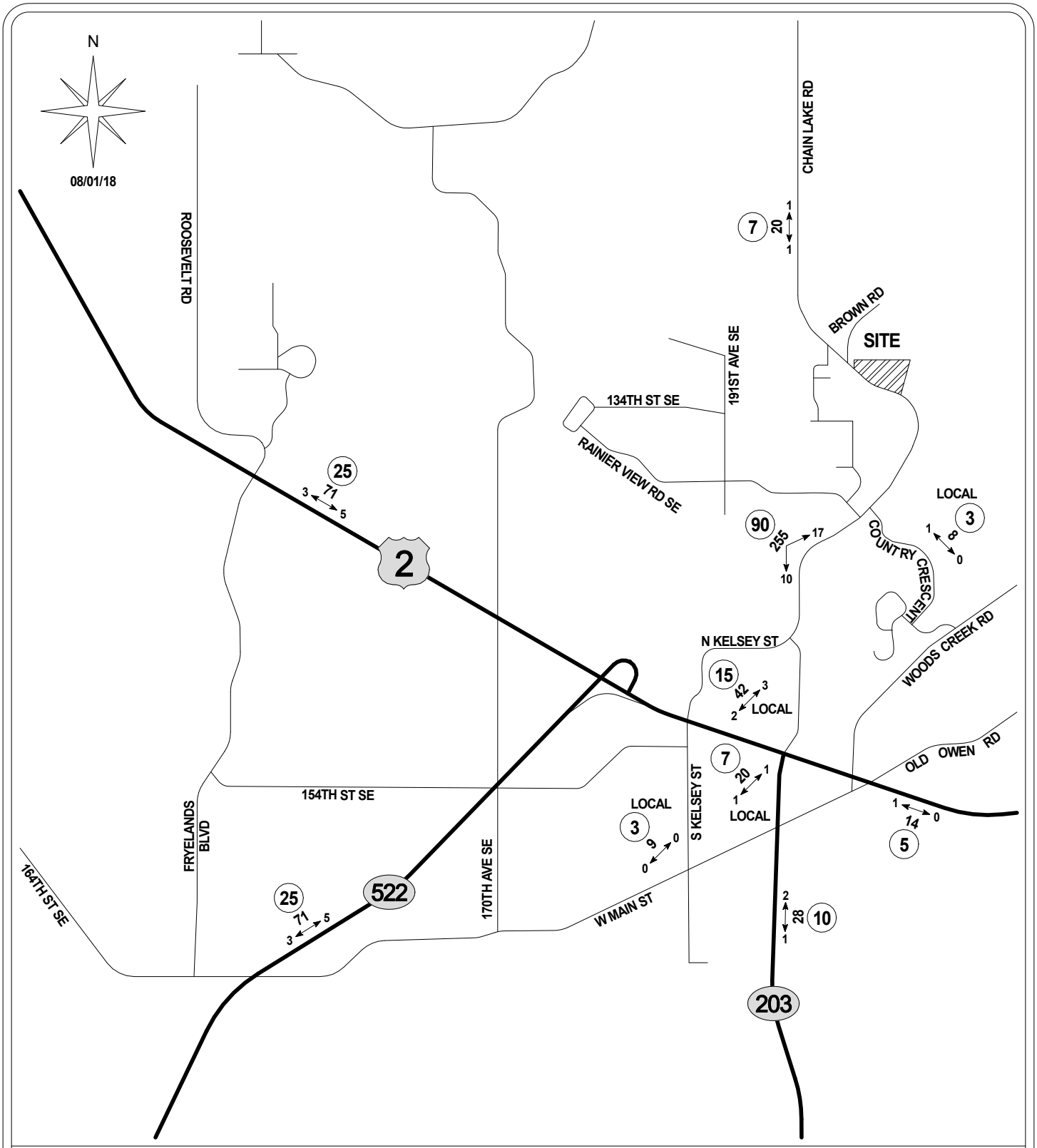
Vehicle Trip Distribution & Assignment

FIGURE 3

Woods Creek Highlands

transpogroup
WHAT TRANSPORTATION CAN BE.

Oct 04, 2018 - 2:45pm jonathans M:\18\1.18295.00 - Woods Creek Highlands\Graphics\DWG\18295_Graphics.dwg Layout: Distribution



G IBSON T RAFFIC C ONSULTANTS

TRAFFIC IMPACT STUDY
GTC #18-042

KESTREL RIDGE
30 NEW SINGLE FAMILY DWELLINGS

CITY OF MONROE

LEGEND

AWDT
PM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR

Level of Service Calculations

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	58	0	10	0	244	98	11	121	0
Future Vol, veh/h	0	0	0	58	0	10	0	244	98	11	121	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	0	0	63	0	11	0	265	107	12	132	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	480	528	132	475	475	319	132	0	0	372	0	0
Stage 1	156	156	-	319	319	-	-	-	-	-	-	-
Stage 2	324	372	-	156	156	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.51	6.21	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	498	457	920	502	490	724	1459	-	-	1192	-	-
Stage 1	849	770	-	695	655	-	-	-	-	-	-	-
Stage 2	690	621	-	849	770	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	487	452	920	498	485	724	1459	-	-	1192	-	-
Mov Cap-2 Maneuver	487	452	-	498	485	-	-	-	-	-	-	-
Stage 1	849	762	-	695	655	-	-	-	-	-	-	-
Stage 2	680	621	-	840	762	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	13	0	0.7
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1459	-	-	-	522	1192	-	-
HCM Lane V/C Ratio	-	-	-	-	0.142	0.01	-	-
HCM Control Delay (s)	0	-	-	0	13	8.1	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	15	404	98	17	209
Future Vol, veh/h	70	15	404	98	17	209
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	71	15	408	99	17	211

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	703	458	0	0	507	0
Stage 1	458	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	405	605	-	-	1063	-
Stage 1	639	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	399	605	-	-	1063	-
Mov Cap-2 Maneuver	399	-	-	-	-	-
Stage 1	639	-	-	-	-	-
Stage 2	785	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	399	605	1063	-
HCM Lane V/C Ratio	-	-	0.177	0.025	0.016	-
HCM Control Delay (s)	-	-	16	11.1	8.4	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	93	153	499	269	10
Future Vol, veh/h	3	93	153	499	269	10
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	3	94	155	504	272	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1095	281	286	0	-	0
Stage 1	281	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	238	760	1282	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	208	757	1277	-	-	-
Mov Cap-2 Maneuver	208	-	-	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	435	-	-	-	-	-

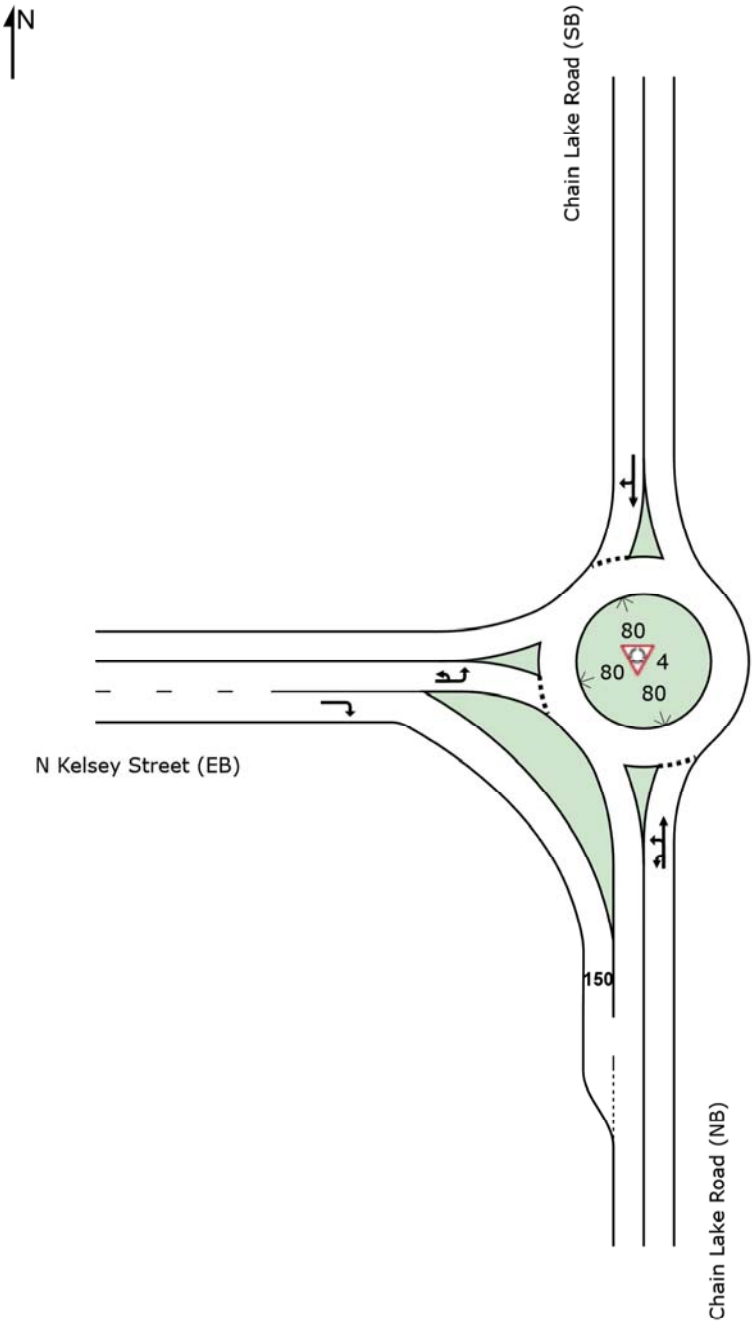
Approach	EB	NB	SB
HCM Control Delay, s	11	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1277	-	699	-	-
HCM Lane V/C Ratio	0.121	-	0.139	-	-
HCM Control Delay (s)	8.2	-	11	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.5	-	-

SITE LAYOUT

Site: 4 [Existing Conditions]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout



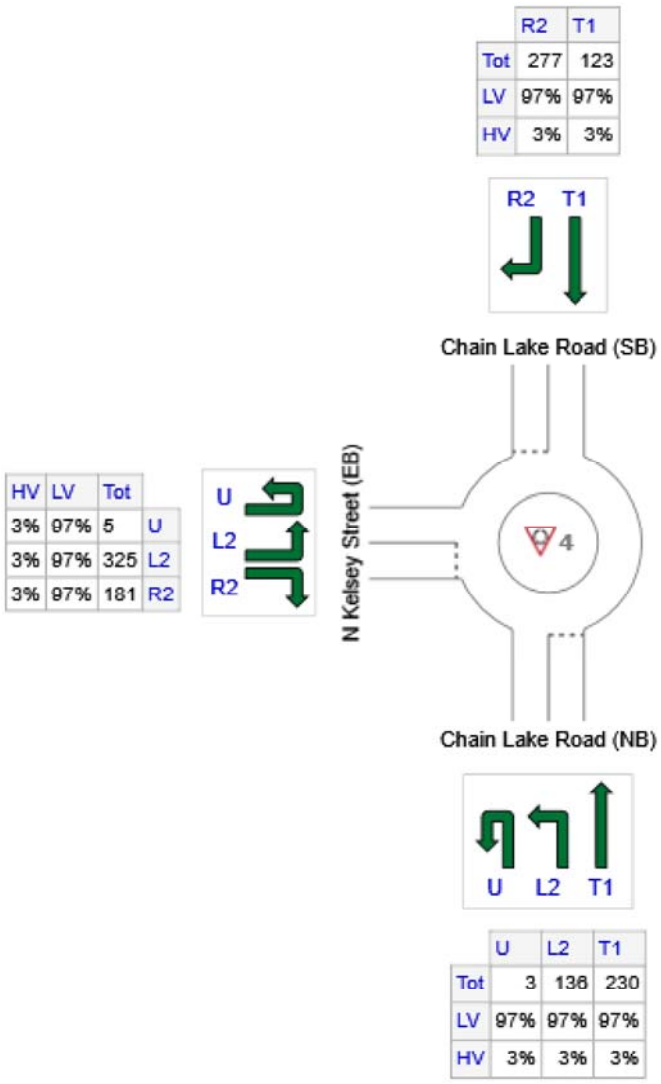
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 4 [Existing Conditions]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Chain Lake Road (NB)	369	358	11
N: Chain Lake Road (SB)	400	388	12
W: N Kelsey Street (EB)	511	496	15
Total	1280	1242	38

MOVEMENT SUMMARY

Site: 4 [Existing Conditions]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Chain Lake Road (NB)												
3u	U	3	3.0	0.397	14.2	LOS B	2.7	68.8	0.63	0.71	0.63	35.2
3	L2	146	3.0	0.397	12.0	LOS B	2.7	68.8	0.63	0.71	0.63	34.5
8	T1	247	3.0	0.397	6.7	LOS A	2.7	68.8	0.63	0.71	0.63	34.6
Approach		397	3.0	0.397	8.7	LOS A	2.7	68.8	0.63	0.71	0.63	34.5
North: Chain Lake Road (SB)												
4	T1	132	3.0	0.369	5.3	LOS A	2.7	68.1	0.46	0.54	0.46	36.2
14	R2	298	3.0	0.369	5.2	LOS A	2.7	68.1	0.46	0.54	0.46	35.2
Approach		430	3.0	0.369	5.2	LOS A	2.7	68.1	0.46	0.54	0.46	35.5
West: N Kelsey Street (EB)												
5u	U	5	3.0	0.248	12.3	LOS B	1.6	40.7	0.35	0.62	0.35	34.4
5	L2	349	3.0	0.248	10.1	LOS B	1.6	40.7	0.35	0.62	0.35	33.8
12	R2	195	3.0	0.120	3.8	LOS A	0.0	0.0	0.00	0.47	0.00	36.8
Approach		549	3.0	0.248	7.9	LOS A	1.6	40.7	0.23	0.57	0.23	34.8
All Vehicles		1376	3.0	0.397	7.3	LOS A	2.7	68.8	0.42	0.60	0.42	34.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	14	75	0	13	24	329	127	14	176	2
Future Vol, veh/h	1	0	14	75	0	13	24	329	127	14	176	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	0	15	82	0	14	26	358	138	15	191	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	708	770	192	709	702	427	193	0	0	496	0	0
Stage 1	222	222	-	479	479	-	-	-	-	-	-	-
Stage 2	486	548	-	230	223	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.51	6.21	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	351	332	852	350	364	630	1386	-	-	1073	-	-
Stage 1	783	722	-	570	557	-	-	-	-	-	-	-
Stage 2	565	519	-	775	721	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	332	318	852	333	349	630	1386	-	-	1073	-	-
Mov Cap-2 Maneuver	332	318	-	333	349	-	-	-	-	-	-	-
Stage 1	763	710	-	555	543	-	-	-	-	-	-	-
Stage 2	538	506	-	749	709	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	18.7	0.4	0.6
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1386	-	-	771	358	1073	-	-
HCM Lane V/C Ratio	0.019	-	-	0.021	0.267	0.014	-	-
HCM Control Delay (s)	7.6	0	-	9.8	18.7	8.4	0	-
HCM Lane LOS	A	A	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.1	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	97	23	648	129	23	352
Future Vol, veh/h	97	23	648	129	23	352
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	98	23	655	130	23	356

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1122	720	0	0	785	0
Stage 1	720	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	229	430	-	-	838	-
Stage 1	484	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	223	430	-	-	838	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	484	-	-	-	-	-
Stage 2	660	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.5	0	0.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	223	430	838	-
HCM Lane V/C Ratio	-	-	0.439	0.054	0.028	-
HCM Control Delay (s)	-	-	33.2	13.9	9.4	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	2.1	0.2	0.1	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	224	376	762	417	32
Future Vol, veh/h	15	224	376	762	417	32
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	15	226	380	770	421	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1971	441	457	0	-	0
Stage 1	441	-	-	-	-	-
Stage 2	1530	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	69	618	1109	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	198	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	45	616	1105	-	-	-
Mov Cap-2 Maneuver	45	-	-	-	-	-
Stage 1	425	-	-	-	-	-
Stage 2	197	-	-	-	-	-

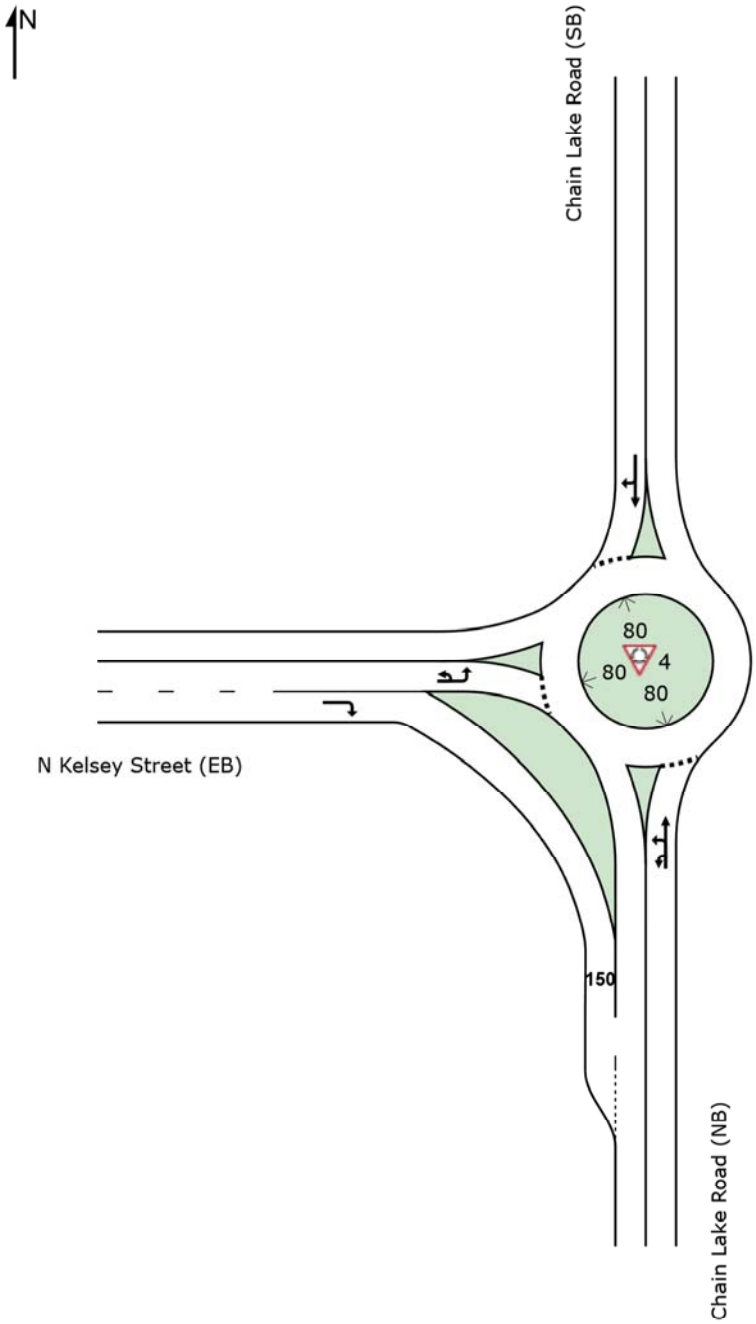
Approach	EB	NB	SB
HCM Control Delay, s	37	3.3	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1105	-	343	-	-
HCM Lane V/C Ratio	0.344	-	0.704	-	-
HCM Control Delay (s)	10	-	37	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	1.5	-	5.1	-	-

SITE LAYOUT

Site: 4 [2031 Baseline Conditions]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout



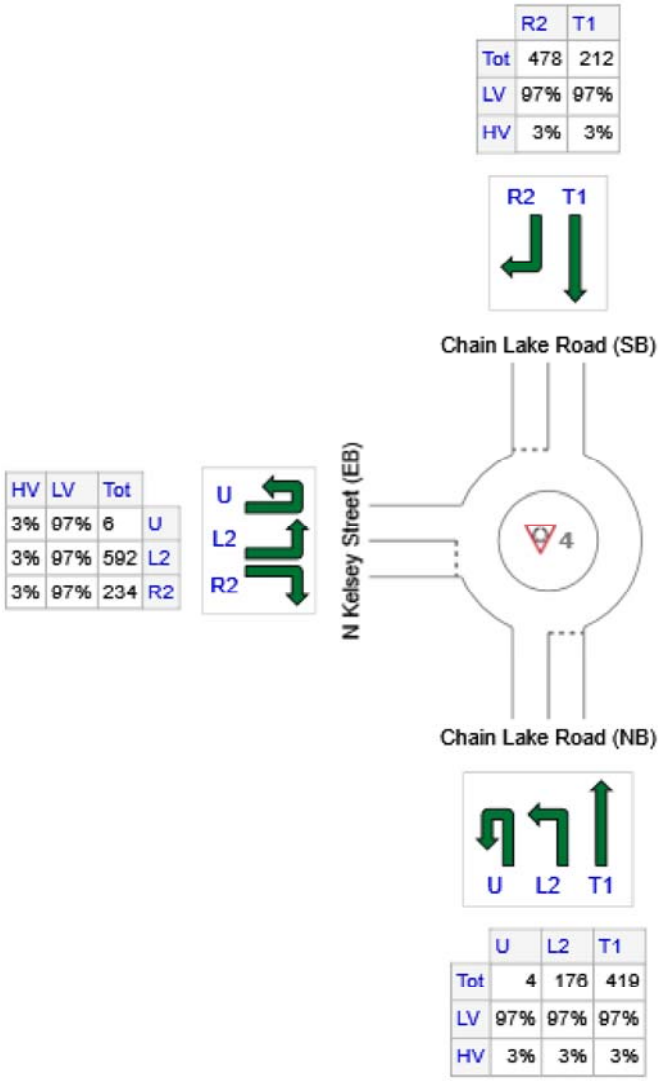
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 4 [2031 Baseline Conditions]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Chain Lake Road (NB)	599	581	18
N: Chain Lake Road (SB)	690	669	21
W: N Kelsey Street (EB)	832	807	25
Total	2121	2057	64

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Organisation: GIBSON TRAFFIC CONSULTANTS | Created: Monday, August 30, 2021 11:12:53 AM
Project: H:\2018\18-334\Update February 2021\Comment Response\Sidra\Chain Lake Rd at Kelsey St.sip8

MOVEMENT SUMMARY

Site: 4 [2031 Baseline Conditions]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Chain Lake Road (NB)												
3u	U	4	3.0	0.883	33.2	LOS D	16.8	428.8	1.00	1.40	2.00	27.6
3	L2	189	3.0	0.883	31.0	LOS D	16.8	428.8	1.00	1.40	2.00	27.2
8	T1	451	3.0	0.883	25.7	LOS D	16.8	428.8	1.00	1.40	2.00	27.2
Approach		644	3.0	0.883	27.3	LOS C	16.8	428.8	1.00	1.40	2.00	27.2
North: Chain Lake Road (SB)												
4	T1	228	3.0	0.681	6.7	LOS A	7.8	198.9	0.78	0.67	0.80	35.4
14	R2	514	3.0	0.681	6.6	LOS A	7.8	198.9	0.78	0.67	0.80	34.4
Approach		742	3.0	0.681	6.6	LOS A	7.8	198.9	0.78	0.67	0.80	34.7
West: N Kelsey Street (EB)												
5u	U	6	3.0	0.496	13.1	LOS B	4.2	108.7	0.61	0.68	0.61	33.8
5	L2	637	3.0	0.496	10.9	LOS B	4.2	108.7	0.61	0.68	0.61	33.2
12	R2	252	3.0	0.155	3.8	LOS A	0.0	0.0	0.00	0.47	0.00	36.8
Approach		895	3.0	0.496	8.9	LOS A	4.2	108.7	0.44	0.62	0.44	34.1
All Vehicles		2281	3.0	0.883	13.4	LOS B	16.8	428.8	0.71	0.86	1.00	32.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	14	75	0	13	24	331	127	14	180	2
Future Vol, veh/h	1	0	14	75	0	13	24	331	127	14	180	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	0	15	82	0	14	26	360	138	15	196	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	715	777	197	716	709	429	198	0	0	498	0	0
Stage 1	227	227	-	481	481	-	-	-	-	-	-	-
Stage 2	488	550	-	235	228	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.51	6.21	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	347	329	847	347	360	628	1381	-	-	1071	-	-
Stage 1	778	718	-	568	555	-	-	-	-	-	-	-
Stage 2	563	517	-	770	717	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	328	315	847	330	345	628	1381	-	-	1071	-	-
Mov Cap-2 Maneuver	328	315	-	330	345	-	-	-	-	-	-	-
Stage 1	757	707	-	553	540	-	-	-	-	-	-	-
Stage 2	535	503	-	744	706	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	18.8	0.4	0.6
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1381	-	-	766	355	1071	-	-
HCM Lane V/C Ratio	0.019	-	-	0.021	0.269	0.014	-	-
HCM Control Delay (s)	7.7	0	-	9.8	18.8	8.4	0	-
HCM Lane LOS	A	A	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.1	0	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	97	25	696	129	24	380
Future Vol, veh/h	97	25	696	129	24	380
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	98	25	703	130	24	384

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1200	768	0	0	833	0
Stage 1	768	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	205	403	-	-	804	-
Stage 1	460	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	199	403	-	-	804	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.4	0	0.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	199	403	804	-
HCM Lane V/C Ratio	-	-	0.492	0.063	0.03	-
HCM Control Delay (s)	-	-	39.5	14.5	9.6	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	2.4	0.2	0.1	-

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	224	376	810	445	32
Future Vol, veh/h	15	224	376	810	445	32
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	15	226	380	818	449	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2047	469	485	0	-	0
Stage 1	469	-	-	-	-	-
Stage 2	1578	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	62	596	1083	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	40	594	1079	-	-	-
Mov Cap-2 Maneuver	40	-	-	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	187	-	-	-	-	-

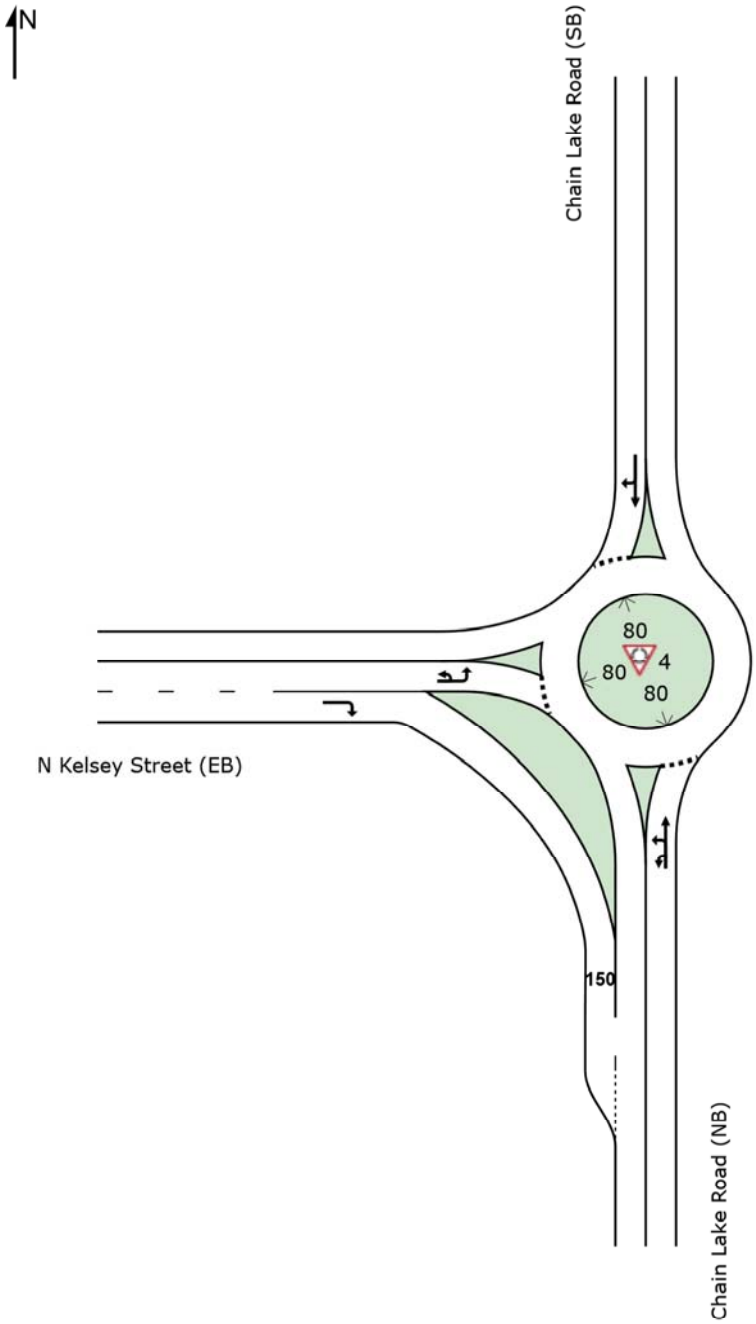
Approach	EB	NB	SB
HCM Control Delay, s	44.6	3.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1079	-	318	-	-
HCM Lane V/C Ratio	0.352	-	0.759	-	-
HCM Control Delay (s)	10.1	-	44.6	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	1.6	-	5.9	-	-

SITE LAYOUT

Site: 4 [2031 Future Conditions w Development]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout



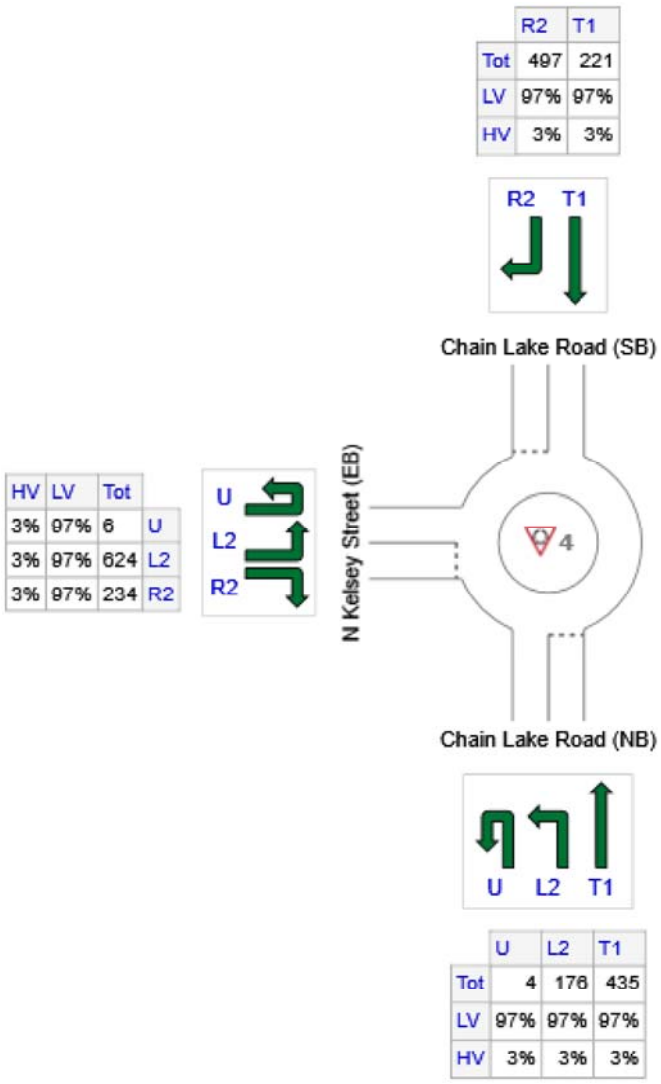
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 4 [2031 Future Conditions w Development]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Chain Lake Road (NB)	615	597	18
N: Chain Lake Road (SB)	718	696	22
W: N Kelsey Street (EB)	864	838	26
Total	2197	2131	66

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MOVEMENT SUMMARY

Site: 4 [2031 Future Conditions w Development]

Chain Lake Road at N Kelsey Street
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Chain Lake Road (NB)												
3u	U	4	3.0	0.949	44.0	LOS D	22.6	578.3	1.00	1.60	2.51	24.4
3	L2	189	3.0	0.949	41.7	LOS D	22.6	578.3	1.00	1.60	2.51	24.1
8	T1	468	3.0	0.949	36.5	LOS D	22.6	578.3	1.00	1.60	2.51	24.1
Approach		661	3.0	0.949	38.0	LOS D	22.6	578.3	1.00	1.60	2.51	24.1
North: Chain Lake Road (SB)												
4	T1	238	3.0	0.708	7.1	LOS A	8.7	223.5	0.81	0.69	0.85	35.3
14	R2	534	3.0	0.708	7.0	LOS A	8.7	223.5	0.81	0.69	0.85	34.3
Approach		772	3.0	0.708	7.0	LOS A	8.7	223.5	0.81	0.69	0.85	34.6
West: N Kelsey Street (EB)												
5u	U	6	3.0	0.527	13.3	LOS B	4.7	120.0	0.64	0.69	0.64	33.8
5	L2	671	3.0	0.527	11.0	LOS B	4.7	120.0	0.64	0.69	0.64	33.1
12	R2	252	3.0	0.155	3.8	LOS A	0.0	0.0	0.00	0.47	0.00	36.8
Approach		929	3.0	0.527	9.1	LOS A	4.7	120.0	0.47	0.63	0.47	34.0
All Vehicles		2362	3.0	0.949	16.5	LOS B	22.6	578.3	0.73	0.92	1.16	30.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	31	52	672	375	4
Future Vol, veh/h	2	31	52	672	375	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	34	57	730	408	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1254	410	412	0	-	0
Stage 1	410	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	190	642	1147	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	422	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	174	642	1147	-	-	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	422	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1147	-	552	-	-
HCM Lane V/C Ratio	0.049	-	0.065	-	-
HCM Control Delay (s)	8.3	0	12	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

EXHIBIT 18

RECEIVED
03/10/2021
CITY OF MONROE

CRITICAL AREAS STUDY AND CONCEPTUAL MITIGATION PLAN

GARIBALDI PRD

MONROE, WASHINGTON

Prepared For:
Westcott Homes
Kirkland, Washington

Prepared By:
TALASAEA CONSULTANTS, INC.
Woodinville, Washington

28 November 2018
(*Revised 4 March 2021*)

Critical Areas Study and Conceptual Mitigation Plan

Garibaldi PRD

Monroe, Washington

Prepared For:

Westcott Homes
1010 Market Street,
Kirkland, WA 98033

Prepared By:

Talasaea Consultants, Inc.
15020 Bear Creek Road NE
Woodinville, Washington 98077
(425) 861-7550

28 November 2018
(*Revised 4 March 2021*)

EXECUTIVE SUMMARY

PROJECT NAME:	Garibaldi PRD
CLIENT:	Melanie Davies, Westcott Homes
SITE LOCATION:	The Garibaldi PRD site is an approximately 18.22-acre assemblage of five (5) parcels located in the City of Monroe. It is bounded to the north and south by single family residences, to the west by a new single-family development, and to the east by Chain Lake Road. The Snohomish County Tax Parcel numbers for the site are 28073100200800 (Parcel A), 28073100201600 (Parcel B), 28073100203900 (Parcel C), 28073100202800 (Parcel D), and 28073100202900 (Parcel E). The Public Land Survey System location for this assemblage is the NW ¼ of Section 31, Township 28 North, Range 7 East, Willamette Meridian (W.M.).
PROJECT STAFF:	Ann Olsen, RLA, Senior Project Manager; Kellen Maloney Ecologist.
FIELD SURVEY:	The Site was evaluated by Talasaea Consultants on 12 and 16 October 2018 and 15 and 27 January 2021.

DETERMINATION: The site contains one wetland (Wetland A) and one Type 5 stream (Stream 1) on-site. Another Type 5 stream (Stream 2) occurs more than 100-feet off-site to the north, and additional wetlands occur on the opposite side of Chain Lake Road. Wetland A rated as a City of Monroe Category III wetland per Monroe Municipal Code (MMC) §20.05.080 that requires a standard buffer of 75 feet. Stream 1 is typed as a Type 5 water reflecting its narrow channel width and lack of fish, including salmonids. MMC §20.05.090.D.6 requires a 50-foot standard buffer for Type 5 streams, measured from the ordinary high water mark.

HYDROLOGY, SOILS, and VEGETATION: Hydrology for Wetland A and Stream 1 is provided by surface runoff from the adjacent uphill areas, as well as through the movement of shallow groundwater. Stream 1 is a seasonal stream that seeps from the slope located within the central portion of Wetland A. The NRCS maps two soil types on the Site, including Tokul gravelly medial loam, 8 to 15 percent slopes, over the northern half of the Site and Tokul gravelly medial loam, 0 to 8 percent slopes, over the southern half of the Site. The existing vegetation on the southern two parcels consists primarily of second to third growth mixed conifer/deciduous forest. The northern, larger parcel is currently a functioning equestrian facility with a barn, riding areas, and pastures that lack native species and any native communities.

CRITICAL SPECIES: The Washington Department of Fish & Wildlife (WDFW) Priority Habitat and Species (PHS) database indicates nothing for the critical areas on or adjacent to the Site. The nearest salmonid-bearing stream is more than ½ mile to the southeast.

PROPOSED PROJECT: Westcott Homes plans to develop the Garibaldi PRD site with 90 single-family lots with interior circulation routes, open/recreation areas, and supporting utilities and stormwater facilities. Constraints to development included the presence of a vacant powerline easement across the center of Parcel A; sight-line issues in association with access roads to Chain Lake Road; and the presence of Wetland A within the parcels that have the only viable access to Chain Lake Road.

ASSESSMENT OF DEVELOPMENT IMPACTS: No impacts to the wetland or stream are proposed with this Project. No impacts to the Stream B buffers are proposed. However, the project is proposing buffer averaging for Wetland A in order to construct a viable Site Plan that meets all the requirements of the MMC, as well as to accommodate residential lots.

PROPOSED MITIGATION: Buffers are proposed to be averaged to accommodate the surrounding residential lots. Buffer replacement with enhancement is proposed to mitigate for buffer reduction areas. The proposed mitigation will result in no net loss of critical area functions and values compared to existing conditions and will result in a net gain of buffer area. Long-term performance monitoring and maintenance will commence following mitigation construction completion.

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CHAPTER 1. INTRODUCTION

1.1 Purpose of Report

This report is the result of a critical areas study for the Garibaldi PRD property (referred to hereinafter as the Project Site or Site) located in the city of Monroe, Washington (**Figure 1**). The Project Site is the location of a proposed Planned Residential Development (PRD). The purpose of this report is to 1) identify and describe critical areas (wetlands, streams, fish and wildlife habitat areas, etc.) and critical species on or adjacent to the Project Site, 2) describe potential impacts to critical areas resulting from the proposed development, and 3) describe proposed mitigation for impacts to critical areas. The report has been prepared to comply with the requirements of the Monroe Municipal Code (MMC) Chapter 20.05.060 – Critical Areas Studies. This project is vested under the 2018 version of MMC Chapter 20.

This report will provide and describe the following information:

- General Property Description;
- Methodology for Critical Areas Investigation;
- Results of Critical Areas Background Review and Field Investigation;
- Regulatory Review;
- Description of the Proposed Project;
- Assessment of Project Impacts to Critical Areas;
- Mitigation Sequencing;
- Proposed Mitigation;
- Site Specific Goals, Objectives, and Performance Standards;
- Construction Management;
- Monitoring, Maintenance, and Contingency Plans; and
- Performance Security.

1.2 Statement of Accuracy

Stream, wetland, and habitat characterizations and ratings were conducted by trained professionals at Talasaea Consultants, Inc., and adhered to the protocols, guidelines, and generally accepted industry standards available at the time the work was performed. The conclusions in this report are based on the results of analyses performed by Talasaea Consultants and represent our best professional judgment. To that extent and within the limitation of project scope and budget, we believe the information provided herein is accurate and true to the best of our knowledge. Talasaea Consultants does not warrant any assumptions or conclusions not expressly made in this report, or based on information or analyses other than what is included herein.

1.3 Qualifications

Field investigations and evaluations were conducted by Talasaea staff including: Jennifer Marriott, PWS, Senior Ecologist, and Kellen Maloney, Ecologist. Jennifer Marriott has a Bachelor's Degree and a Master's Degree in Biology from University of Central Florida, and a second Master's Degree in Soil and Environmental Science from the University of Florida. She has over 15 years of experience in wetland delineations and environmental permitting. Kellen has a Bachelor's Degree of Environmental Science and a Certification of Wetland Science and Management from the University of

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Washington. Kellen has 5 years of experience in wetland delineations and environmental permitting. The mitigation design was prepared by Ann Olsen, RLA. Ann has over 25 years of experience in site planning and designing critical area mitigation plans.

CHAPTER 2. GENERAL PROPERTY DESCRIPTION AND LAND USE

2.1 Project Location

The Garibaldi PRD site is an approximately 18.22-acrre assemblage of five (5) parcels located in the City of Monroe (**Figure 1**). It is bounded to the north and south by single family residences, to the west by a new single-family development, and to the east by Chain Lake Road. The Snohomish County Tax Parcel numbers for the site are 28073100200800 (Parcel A), 28073100201600 (Parcel B), 28073100203900 (Parcel C), 28073100202800 (Parcel D), and 28073100202900 (Parcel E) (**Figure 2**). The Public Land Survey System location for this assemblage is the NW ¼ of Section 31, Township 28 North, Range 7 East, Willamette Meridian (W.M.).

2.2 General Property Description

The Site contains six (6) single-family residences with associated driveways, outbuildings, and parking areas. Two (2) single family residences exist on Parcel A with an associated equestrian facility comprised of a barn and indoor arena. Fenced, heavily grazed pastures occupy the majority of the remainder of Parcel A. Parcels B, C, D, and E each contain one residence. undeveloped, forested areas comprise the remainder of these parcels.

Site topography is generally sloping down to the southeast towards a depressional wetland (Wetland A, described later) in the southeast corner of the Site.

2.3 Land Use and Zoning

The Site is currently zoned residential with four (4) dwellings allowed per acre (R4). A platted, but yet unused, powerline easement occurs across Parcel A in an east-west orientation near the center of the Site.

CHAPTER 3. METHODOLOGY

The critical areas analysis of the Site involved a two-part effort. The first part consisted of a preliminary assessment of the Site and the immediate surrounding area using published environmental information. This information includes:

1) Wetland and soils information from resource agencies;
2) Critical Areas information from the City of Monroe and Snohomish County;
3) Anadromous fish presence information from:
    a. StreamNet database,
    b. SalmonScape database;
4) Orthophotography and LIDAR imagery; and,
5) Relevant studies completed or ongoing in the vicinity of the Site.

The second part consisted of site investigations where direct observations and measurements of existing environmental conditions were made. Observations included plant communities, soils, hydrology, and stream conditions. This information was used

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to help characterize the site and define the limits of critical areas onsite and offsite for regulatory purposes (see **Section 3.2 – Field Investigation** below).

3.1 Background Data Reviewed

Background information from the following sources was reviewed prior to field investigations:

- US Fish and Wildlife Service (USFWS), Wetlands Online Mapper (National Wetlands Inventory, NWI) (USFWS 2021) (www.wetlandsfws.er.usgs.gov/wtlnds/launch.html);
- Natural Resources Conservation Service (NRCS), Web Soil Survey (NRCS 2021)(www.websoilsurvey.nrcs.usda.gov/app/);
- NRCS, National Hydric Soils List by State (NRCS 2021) (www.soils.usda.gov/use/hydric/lists/state.html);
- City of Monroe GIS Database (Monroe 2021)
- Snohomish County GIS Database (Snohomish County 2021);
- StreamNet database, 2021 (www.streamnet.org);
- SalmonScape database, 2021 (www.wdfw.wa.gov/mapping/salmonscape/databases);
- NOAA's National Marine Fisheries Service (NMFS), current pacific coast salmon species listed as protected under the Federal Endangered Species Act (http://www.nwr.noaa.gov/protected_species/salmon_steelhead/salmon_and_steelhead_listings/salmon_and_steelhead_listings.html);
- USFWS Washington Office, Federally-Listed and Proposed Endangered and Threatened species and critical habitat; Candidate Species; and Species Of Concern in Snohomish County (2021) (http://www.fws.gov/wafwo/speciesmap/SnohomishCounty0312.pdf);
- Washington State Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) Database on the Web (WDFW 2021) (http://wdfw.wa.gov/mapping/phs/);
- Washington Department of Natural Resources (WDNR) Natural Heritage Database; and
- Orthophotography from USDA's National Agricultural Imagery Program (NAIP 2021) and Google Earth.

3.2 Field Investigation

The Site was evaluated by Talasaea Consultants on 12 and 16 October 2018 on Parcels A, B, and C, and 15 and 27 January 2021 for the additional Parcels D and E.

The wetland delineation utilized the routine approach described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountain, Valleys, and Coast Regions* (U.S. Army Corps of Engineers 2010). The ordinary high-water mark (OWHM) for streams was determined and delineated using the methodology described by Washington State Department of Ecology's "*Determining the Ordinary High Water Mark on Streams in Washington State"* (Olson and Stockdale 2016). Wetlands and streams were classified according to the Monroe Municipal Code (MMC) §20.05.080.D and §20.05.030, respectively.

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Plant species were identified according to the taxonomy of Hitchcock and Cronquist (Hitchcock, et al. 1969). Taxonomic names were updated and plant wetland status was assigned according to *North American Digital Flora: National Wetland Plant List*, *Version 2.4.0* (Lichvar, et al. 2012). Wetland classes were determined with the U.S. Fish and Wildlife Service's system of wetland classification (Cowardin, et al. 1979). Vegetation was considered hydrophytic if greater than 50% of the dominant plant species had a wetland indicator status of facultative or wetter (i.e., facultative, facultative wetland, or obligate wetland).

Wetland hydrology was determined based on the presence of hydrologic indicators listed in the Corps regional supplement. These indicators are separated into Primary Indicators and Secondary Indicators. To confirm the presence of wetland hydrology, one Primary Indicator or two Secondary Indicators must be demonstrated. Indicators of wetland hydrology may include, but are not necessarily limited to: drainage patterns, drift lines, sediment deposition, watermarks, stream gauge data and flood predictions, historic records, visual observation of saturated soils, and visual observation of inundation.

Soils on the site were considered hydric if one or more of the hydric soil indicators listed in the Corps Regional Supplement are present. Indicators include presence of organic soils, reduced, depleted, or gleyed soils, or redoximorphic features in association with reduced soils.

An evaluation of patterns of vegetation, soil, and hydrology was made along the interface of wetland and upland. Wetland boundary points were then determined from this information and marked with wire flags or surveyors tape. **Appendix A** contains data forms prepared by Talasaea for representative locations in both upland and wetland locations within the Site. These data forms document the vegetation, soils, and hydrology information that aided in the wetland boundary determination.

CHAPTER 4. RESULTS

This section describes the results of our in-house research and field investigations. For the purpose of this report, the term "vicinity" describes an area approximately 100 feet around the Project Site.

4.1 Analysis of Existing Information

The following sources provided information on site conditions based on data compiled from resource agencies and local government:

4.1.1 USFWS Wetlands Online Mapper (National Wetlands Inventory)

The National Wetlands Inventory does not map any wetlands on-site or in the vicinity of the Site.

4.1.2 Natural Resources Conservation Service Soil Survey

The NRCS maps two (2) soil types on the Site (**Figure 3**). Most of the Northern half of the Site is mapped as Tokul gravelly medial loam, 8 to 15 percent slopes. Tokul gravelly medial loam, 0 to 8 percent slopes is mapped in the southern and westernmost areas of the Site. Neither are identified as hydric soils themselves, though both are identified as having a small number of hydric inclusions within this map unit.

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The Tokul series is made up of moderately well drained soils formed in glacial till plains and hillslopes. These soils are gravelly medial loam soils that are moderately acid. The gravel component ranges from 15% in the upper horizon to 25% in lower horizons. A-horizon soil colors are typically dark brown, while B-horizon is typically brown, grayish-brown, and dark yellowish brown medial to sandy loam. The C-horizon is dark grayish brown to dark yellowish-brown glacial till.

4.1.1 City of Monroe Critical Areas Maps

City of Monroe critical areas maps indicate one feature, labeled as Wetland Inventory #23, occurring on the eastern half of the Site. Only a small portion of the southern portion of this mapped feature exists and was identified as Wetland A (see Section 4.2). The remainder of this mapped feature did not meet the wetland criteria.

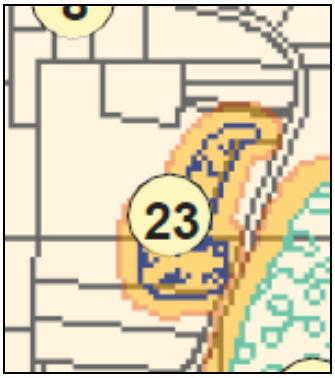


Photo 1. Snip from City of Monroe Wetland Inventory Map, showing Wetland #23

4.1.2 Snohomish County GIS Database

Snohomish County GIS database does not map any features on or within the vicinity of the Site.

4.1.3 StreamNet and SalmonScape Databases

The StreamNet and SalmonScape databases show no stream or fish activity within the project boundaries or vicinity.

4.1.4 WDFW Priority Habitats and Species and WDNR Natural Heritage Databases

The WDFW PHS Database (web-based map format) was reviewed for the presence or absence of priority species, rare plants, and high quality native ecosystems on or in the vicinity of the Project Site. No features were mapped within the Site or its vicinity.

4.2 Analysis of Existing Field Conditions

One stream and one wetland were identified on the Project Site. The stream was classified in accordance with the water typing rules contained in Washington Administrative Code (WAC) 222-16-030. Wetlands were classified according to the rating system and criteria contained in the *Washington State Wetland Rating System for Western Washington* (Hruby 2014). Wetland rating forms are included in **Appendix B**. The on-site features are described in the following sections.

4.2.1 Wetland A

Wetland A is a slope wetland associated with Stream 1 and totals 9,442 sf (0.22 acres) on the Project Site (**Appendix C, Sheet W1.0**). This wetland extends off-site to the

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east towards Chain Lake Road. Wetland A is primarily forested with red alder (*Alnus rubra*) dominating the canopy and sub-canopy. Salmonberry (*Rubus spectabilis*) dominates the understory within this slope wetland. This wetland clearly receives regular overbank flooding from Stream 1, especially closer to the road where a culvert is located. Other species that occur within the wetland to a lesser extent include skunk cabbage (*Lysichiton americanus*), reed canarygrass (*Phalaris arundinacea*), and giant horsetail (*Equisetum telmateia*). The immediately adjacent uplands are dominated by native vegetation including big leaf maple (*Acer macrophyllum*), Indian plum (*Oemleria cerasiformis*), beaked hazelnut (*Coryllus cornuta*), and Himalayan blackberry (*Rubus armeniacus*). Large areas of yellow archangel (*Lamiastrum galeobdolon*) are present within the Wetland A buffer. The buffer farther to the north is used as horse pasture and contains creeping buttercup (*Ranunculus repens*) and field grasses that are heavily grazed.

Soils in this wetland are generally a black loamy mineral soil. The soil color is consistently dark, with a test pit reflecting a black (10YR 2/1) matrix color with no redoximorphic features present. Hydric soils were assumed based on the low chroma, dark soils, and presence of wetland hydrology and vegetation. Hydrology for Wetland A is provided by multiple sources, including precipitation and groundwater seepage from the adjacent hill, as well as overland flow. A hillside seep located within the wetland is the primary source of flows in Stream 1.

Wetland A scored 6 points for Water Quality Functions, 4 points for Hydrologic Functions, and 6 points for Habitat Functions. The Total Score for Functions was 16. This satisfies the criteria for classification of Wetland A as a City of Monroe Category III wetland per MMC §20.05.030. Category III wetlands, regardless of individual function scores, require a standard buffer of 75 feet.

4.2.2 Stream 1

Stream 1 begins within the Project Site at a seasonal seep in Wetland A and flows east through Wetland A (described below) toward Chain Lake Road. The stream then flows south along Chain Lake Road before crossing the road through a 12” culvert. Stream 1 then continues in a generally southeast direction towards 205th Avenue SE before continuing south and then west to enter Woods Creek more than a mile south of the Site. No floodplain is mapped around this stream.

The stream channel is generally well-defined, and produced a barely perceptible trickle of water during the Site evaluations. No salmonids are mapped as occurring within this stream, nor were any salmonids or other species of fish observed during field assessments. Salmonids and other fish populations do not have the potential of occurring within this stream, as the channel width is less than 2 feet wide in all areas with only seasonal stream flow. Additionally, the nearest salmonid-bearing water is more than ½ mile southeast of the Site, south of Woods Creek Road. This stream system flows through a ravine north of Woods Creek Road that creates a natural barrier to salmonids migrating upstream.

Accordingly, Stream 1 is typed as a Type 5 water reflecting its narrow channel width and lack of fish, including salmonids. MMC §20.05.090.D.6 requires a 50-foot standard buffer for Type 5 streams, measured from the OHWM. The buffer for this stream is wholly contained within Wetland A and its associated wetland buffer.

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4.2.3 Off-site Critical Areas

Another stream, Stream 2, occurs off-site between the Site and Chain Lake Road on private property north of Wetland A and Stream 1. This seasonal stream originates on the adjacent property and flows east under Chain Lake Road. The start of this stream was measured at over 100 feet from the property boundary but was not formally surveyed. No other critical areas were observed adjacent to the Site on the west side of Chain Lake Road.

Additional streams, and likely an associated wetland, occur on the east side of Chain Lake Road, opposite the Site. A delineation of these features was not possible as site access was not provided. The wetland would line up with the approximate boundaries of Wetland #6A of the Monroe Wetland Inventory. However, neither the NWI nor Snohomish County PDS Viewer identified wetlands consistent with Wetland #6A of the Monroe Wetland Inventory. Snohomish County PDS did identify a wetland polygon that partially overlaps the southeastern portion of Wetland #6A, noted as being based on remote sensing wetland model, that seems more likely given the topography in this area. The upper reaches of the parcel on the east side of Chain Lake Road indicate roughly 15% slopes with likely streams located within ravines until the topography flattens out farther south and east. The nearest point of the approximate Snohomish County-mapped wetland is approximately 200 feet from the eastern edge of the Site. That said, Chain Lake Road separates any wetlands on the east side of the road from the onsite wetland (Wetland A).

4.3 Wildlife Habitat

The site offers few habitats that can be utilized by different species of birds, small mammals, amphibians, and reptiles. Habitats can be grouped into three categories based on land use and plant association. These habitats include maintained upland pasture areas, mixed deciduous-coniferous upland forest, and wetland habitat.

The existing upland vegetation within the maintained upland pasture areas is characterized by a lack of trees and shrubs. This habitat is dominated by creeping buttercup and grass species and is heavily impacted by the very active horse grazing and poor land management. The mixed deciduous-coniferous forested upland vegetation community is dominated by red alder and salmonberry and generally surrounds onsite wetland habitat. The native forested community is located on Parcels B and C. Parcels D and E are mostly developed with lawn areas and do not contain a significant amount of high-quality habitat.

The wetland habitat is a mix of forested and emergent species with reed canarygrass dominating the wetland nearer to the road where the canopy is lacking. Habitat features within the wetland areas onsite include large, downed woody debris. Priority snags occur on Parcel C within 100 meters of the wetland. Habitat diversity is also complimented by the instream and riparian habitat areas associated with Stream 1.

Direct wildlife observations included a variety of resident and migratory songbird species. No other direct or indirect wildlife observations were made.

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4.3.1 Critical Species Presence

No listed species were identified as occurring within or adjacent to the Site, nor were any mapped by the WDFW Priority Habitats and Species database. No listed species are expected to occur within the Site.

CHAPTER 5. REGULATORY REVIEW

5.1 State and Federal Regulations

Any direct impacts to wetlands or streams would be subject to applicable State and Federal regulations. Wetland impacts are regulated on the Federal level by Sections 404 and 401 of the Clean Water Act. The US Army Corps of Engineers (Corps) is responsible for administering compliance with Section 404 via the issuance of Nationwide or Individual Permits for any fill or dredging activities within wetlands. Any project that is subject to Section 404 permitting is also subject to requirements of Section 401 of the Clean Water Act (CWA), administered by the Department of Ecology (DOE). This project is not proposing any direct impacts (dredging or filling) of wetlands or streams, thus no permits from State or Federal agencies are required.

5.2 City of Monroe Regulations

A summary of critical areas on and within 100 feet of the project site is provided in **Table 1** below. The ratings for critical areas potentially affecting the Site were determined using guidance from MMC Table 20.05.030. Required buffers were determined according to MMC §20.05.080 and §20.05.090. A summary of the required buffers is outlined below in **Table 1**.

Table 1. Summary of Critical Areas

Critical Area	Wetland Category (Habitat Score)	Stream Type	Standard Wetland Buffer (feet)	Standard Stream Buffer (feet)	Area of Critical Area (on-site)
Wetland A	III	N/A	75	N/A	9,442 sf
Stream 1	N/A	5 (Ns)	N/A	50	111 linear feet
Stream 2 (off-site)	N/A	5 (Ns)	N/A	50 (does not extend onto Site)	N/A

Chapter 20.05.080.F of the MMC outlines the required parameters for buffer averaging for projects that deviate from the standard buffer widths mentioned above.

CHAPTER 6. PROPOSED DEVELOPMENT AND CRITICAL AREAS IMPACTS

6.1 Project Description

Westcott Homes plans to develop the Garibaldi PRD site with 90 single-family Planned Residential Development (PRD) with associated infrastructure, internal roads, trails, and open space areas (**Sheet W1.1** in **Appendix C**). Park and recreation space is required, as part of the PRD, which is separate from the on-site critical areas.

Access to the development will be through the southern frontage along Chain Lake Road, as sight line distances from the northern frontage do not meet City regulations given the sharp bend in Chain Lake Road north of the Site.

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6.2 Stormwater

Stormwater runoff from the improved Garibaldi PRD project site will be collected and conveyed primarily by means of a series of catch basin inlets connected by below-grade pipes. These systems flow into two separate on-site detention vault facilities. One facility is located north of Wetland A and in the southernmost portion of the Site. Flows from the northern detention facility will be released at a controlled rate by means of a standard riser assembly in a below-grade catch basin structure. Discharge from the northern storm water system will outfall into a dispersion trench within the outer portion of the Wetland A buffer to take advantage of the natural topography and vegetation to support it's hydrology. All storm water runoff collection, conveyance, treatment, and flow control facilities are proposed in general accordance with the applicable provisions of the City of Monroe 2014 Stormwater Manual as described in municipal code section 15.01.025.

6.3 Assessment of Development Impacts

The proposed site development will avoid all direct wetland or stream impacts. However, some buffer modification will be unavoidable in order to construct a viable project. Numerous site plan iterations were evaluated to determine the best development layout that addressed the protection of on-site critical areas with the open space/recreation requirements of the PRD while allowing a functioning development that meets the requirements for the City of Monroe. The location of the approximately 100-foot-wide powerline easement across the Site has resulted in the loss of buildable area that is not constrained by critical areas. Buffer will be averaged to accommodate three lots, which will result in a net gain of buffer area.

Approximately 900 square feet of wetland buffer will be reduced to accommodate the three lots. A minimum buffer of 62.25 feet of native, forested buffer will remain between Wetland A and proposed Site development.

Some grading is required to establish a buildable pad for adjacent lots and will result in a temporary buffer impact of 4,783 feet. Areas affected by temporary grading will be restored by planting native species. These temporary impacts will occur within approximately 30.25 feet of the wetland boundary at the closest point.

Portions of the existing buffer for Wetland A are already disturbed by pre-existing, non-conforming features (horse pastures and access road). Additionally, invasive species are pervasive throughout the entire Site, including within Wetland A and its buffer, to varying degrees. Invasive species will be removed from buffer replacement areas and replaced with a diversity of native species.

A 5-foot-wide soft-surface trail will be constructed in the outer 25 percent of the post-construction buffer. The trail will be composed of mulch and will be field located to limit impacts to mature native vegetation. No trees will be removed to create the trail and only minor impacts to shrubs are expected. All trail construction will be consistent with MMC §20.05.080(A)(6) and will total 970 sf within the post-construction buffer of Wetland A.

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CHAPTER 7. PROPOSED MITIGATION

7.1 Agency Policies and Guidance

The mitigation proposed for critical areas impacts is in accordance with the following:

- Monroe Municipal Code, Chapters 20.05, titled *Critical Areas* (Vested 2018 version).
- The Washington State Department of Ecology (DOE) Publication #06-06-011a, *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance* (Version 1, March 2006).

7.2 Mitigation Sequencing

The design of the proposed project employs mitigation sequencing as required by MCC §20.05.080.B, which requires the use of best available science (BAS). Mitigation sequencing is outlined by DOE, and is supported by the Corps, and outlines a preferred order of operations: avoidance, minimization, then compensation for unavoidable impacts.

Avoiding Impacts: The proposed project has been designed to avoid impacts to on-site critical areas to the maximum extent practicable, while still allowing for an economically viable development that meets all code requirements. The project will avoid all direct wetland and stream impacts with only buffer averaging required.

Minimizing Impacts: The proposed project has been re-designed to minimize impacts to on-site buffers. Buffer averaging is required to accommodate some lots due to the loss of buildable area from the powerline easement. The Wetland A buffer will be reduced by a total of 900 square feet, to a minimum buffer width of 62.25 feet. Temporary grading impacts are required to provide a level surface for lots and provide a dispersion trench to the outer 25% of the buffer and will total 4,783 sf. Temporary grading will occur within approximately 30 feet of the wetland at the nearest point. Mitigation for these buffer impacts is described below.

7.3 Proposed Mitigation

The project proposes a combination of several different mitigation measures intended to compensate for buffer functions and values lost through buffer averaging (**Sheet W1.1** in **Appendix C**).

7.3.1 Buffer Replacement

Reduced buffer areas and trail building will be mitigated for through buffer replacement, resulting in a net gain in buffered area. The buffer replacement area totals 3,213 sf and the net gain in buffer area will be 2,313 sf. Buffer replacement areas and temporary buffer impact areas will be enhanced through the removal of invasive species and the planting of a diversity of native species. The 3,213 square-foot of replaced wetland buffer will be enhanced and 4,783 sf of temporary buffer impact will be enhanced. The proposed mitigation is described below.

7.3.2 Buffer Enhancement

The Project will enhance the buffer replacement and temporary buffer impact areas on the Site through the removal of invasive species, where present, and varying densities of supplemental plantings of native trees and shrubs. Invasive species removal will be done by hand or by machinery within the buffer, whichever is determined to be most appropriate. Enhancement measures will include:

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- Removal of all non-native/invasive species;
- Amending soils with compost and fertilizer, as needed; and
- Planting a wide selection of native evergreen and deciduous tree and shrub species.

7.3.3 Permanent Fencing and Signage

Critical areas and their buffers shall be placed within a separate tract per MCC 20.05.070.B. Permanent fencing and critical areas signs shall be installed at the post-construction buffer boundary consistent with the requirements of MCC 20.05.070.D.2.

7.4 Mitigation Design Elements

7.4.1 Hydrologic Support

Hydrologic support for Wetland A and Stream 1 will be provided by controlled infiltration of collected and treated site runoff through a dispersion trench located at the outer limit of the wetland buffer.

7.4.2 Decompaction and Topsoil

All areas of buffer enhancement with existing structures, impervious surface areas, and non-native vegetation will be removed. These areas will be restored through decompaction of existing soils and the importation of high-quality topsoil and/or the addition of soil amendments. High quality topsoil will be placed a minimum of 9-inches deep across the buffer areas.

7.4.3 Habitat Features

Down logs, rootwads, and stumps will be incorporated into the mitigation areas to provide ecologically important habitat features for wildlife. All down woody material shall be coniferous species (western red cedar, Douglas fir, western hemlock, or Sitka spruce) obtained from the project site.

Down logs and stumps provide the slow release of nutrients as the wood decays, and also provide cover for amphibians, small mammals, and other wildlife. Boulders recovered from site excavation (if available) will be placed in small piles throughout the mitigation area. These piles can provide habitat for reptiles and small mammals.

7.4.4 Planting Plan

A Candidate Plant List that outlines a variety of evergreen and deciduous native trees and shrubs species that may be used to plant the mitigation areas is provided on **Sheet W1.1** in **Appendix C**). Plant materials will generally consist of a combination of balled-and-burlapped, bare-root, and container stock. Plant species were chosen for a variety of qualities, including: adaptation to specific water regimes, value to wildlife, value as a physical or visual barrier, pattern of growth (structural diversity), and aesthetic values. Native tree and shrub species were chosen to increase both the structural and species diversity of the mitigation areas, thereby increasing the value of the mitigation areas to wildlife for food and cover. Planting will be planned to occur during the dormant season (late fall, winter, or early spring) to maximize the chance for successful plant establishment and survival.

7.4.5 Temporary Irrigation System

An above ground temporary irrigation system capable of full head-to-head coverage of all planted areas will be provided for the buffer re-establishment and creation areas.

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The temporary irrigation system shall either utilize controller and point of connection (POC) from the site irrigation system or shall include a separate POC and controller with a backflow prevention device per water jurisdiction inspection and approval. The system shall be zoned to provide optimal pressure and uniformity of coverage, as well as separation for areas of full sun or shade and slopes in excess of 5%.

The system shall be operational by June 15 (or at time of planting) and winterized by October 15. Irrigation shall be provided for the first 2 years of the monitoring period. The irrigation system shall be programmed to provide 1/2" of water two times per week (one cycle with two start times per week or every three days). A chart describing the location of all installed or open zones and corresponding controller numbers shall be placed inside the controller and given to the owner's representative. In addition to the temporary irrigation system, a soil moisture retention agent will be incorporated into the backfill of planting pits to minimize the potential for plant desiccation in the mitigation areas.

7.5 Mitigation Goals, Objectives and Performance Standards

The primary goal of the proposed mitigation is to replace the functions and values lost through buffer reductions by replacing and enhancing buffer area. The secondary goal is to enhance the areas impacted by temporary grading disturbance. To accomplish this, the proposed project will provide a total of 7,996 sf of mitigation:

• Buffer Replacement and Enhancement	3,213 sf
• Enhancement of Temporary Buffer Impact Areas	4,783 sf
TOTAL BUFFER MITIGATION	**7,996 sf**

Mitigation actions will be evaluated through the following objectives and performance standards. See **Chapter 9** for a full description of the monitoring methods that will be used to evaluate the approved performance standards. Mitigation monitoring will be performed by a qualified biologist.

Objective A: Create structural and plant species diversity in the designated mitigation areas.

Performance Standard A1: *At least 15 species of desirable native plants will be present during the monitoring period. Species may be comprised of both installed plants and naturally colonized vegetation.*

Performance Standard A2: *Percent survival of planted woody species must be at least 100% at the end of Year 1 (per contactor warranty), and at least 80% for each subsequent year of the monitoring period.*

Performance Standard A3: *In buffer areas that will be completely cleared and soil decompacted, total percent aerial woody plant coverage must be at least 35% by Year 4 and 50% by Year 5. Woody coverage may be comprised of both planted and recolonized native species; however, to maintain species diversity, at no time shall a recolonized species (i.e., red alder) comprise more than 35% of the total woody coverage. There must be at least three native species providing at least 20% each, or four native species providing at least 15% each, or five native species providing at least 10% of the total aerial woody plant coverage.*

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Objective B: Limit the amount of invasive and exotic species within these mitigation areas.

***Performance Standard B**: After construction and following every monitoring event for a period of five years, exotic and invasive plant species will be maintained at levels below 15% total cover in these mitigation areas. These species include Scot's broom, Himalayan and evergreen blackberry, reed canarygrass, purple loosestrife, hedge bindweed, knotweed sp., and creeping nightshade.*

CHAPTER 8. CONSTRUCTION MANAGEMENT

8.1 Mitigation Construction Sequencing

The following provides the general sequence of activities anticipated to be necessary to complete this mitigation project. Some of these activities may be conducted concurrently as the project progresses.

1. Conduct a site meeting between the Contractor, Talasaea Consultants, and the Owner's Representative to review the project plans, staging/stockpile areas, and material disposal areas.
2. Survey clearing limits and install silt fence and any other erosion and sedimentation control BMPs per the civil plans.
3. Follow demolition plan prepared by Engineer for removal of all structures.
4. Clear and grub non-native/invasive vegetation from remaining forested and non-forested buffer areas.
5. Decompact soils in cleared buffer areas.
6. Amend soils as needed to provide 9" of planting medium.
7. Place habitat features, including down logs and stumps.
8. Install plant material as indicated on the planting plan.
9. Add 3 inches of bark mulch to all buffer areas.
10. Install temporary irrigation.
11. Install rail fence and Critical Area signs.

8.2 Post-Construction Approval

Talasaea Consultants shall notify the City in writing when the mitigation planting is completed for a final site inspection and subsequent final approval. Once final approval is obtained in writing from the City, the monitoring period will begin.

8.3 Post-Construction Assessment

Once construction is approved, a qualified wetland ecologist from Talasaea Consultants shall conduct a post-construction assessment. The purpose of this assessment will be to establish baseline conditions at Year 0 of the required monitoring period. A Baseline Assessment report including "as-built" drawings will be submitted to the City. The as-built plan set will identify and describe any changes in grading, planting, or other constructed features in relation to the original approved plan.

CHAPTER 9. MONITORING PLAN

9.1 Monitoring Schedule

Performance monitoring of the mitigation areas will be conducted for a period of five years pursuant to MMC 20.05.070.E. Monitoring will be conducted according to the

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schedule presented in **Table 3** below. Monitoring will be performed by a qualified biologist or ecologist.

Table 2. Projected Schedule for Performance Monitoring

Year	Date	Maintenance Review	Performance Monitoring	Report Due to Agencies
BA[1]	Winter/Spring	X	X	X
1	Spring	X	X	
	Fall	X	X	X
2	Spring	X	X	
	Fall	X	X	X
3	Spring	X		
	Fall	X	X	X
4	Spring	X		
	Fall	X	X	X
5	Spring	X		
	Fall	X	X	X[2]

[1] BA = Baseline Assessment following construction completion.
[2] Obtain final approval from the City of Monroe (presumes performance criteria are met).

9.2 Reports

Monitoring reports shall follow the general guidelines for mitigation monitoring as described in MMC 20.05.070. The reports will include: 1) Project Overview, 2) Requirements, 3) Summary Data, 4) Maps and Plans, and 5) Conclusions. If the performance criteria are met, monitoring for the City will cease at the end of year five, unless objectives are met at an earlier date and the City accepts the mitigation project as successfully completed.

9.2.1 Methods for Monitoring Vegetation Establishment

Vegetation monitoring methods may include counts; photo-points; random sampling; sampling plots, quadrats, or transects; stem density; visual inspection; and/or other methods deemed appropriate by the permitting agencies (City of Monroe). Vegetation monitoring components shall include general appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weed cover.

Permanent vegetation sampling plots, quadrats, and/or transects will be established at selected locations to adequately sample and represent all of the plant communities within the mitigation project areas. The number, exact size, and location of transects, sampling plots, and quadrats will be determined at the time of the baseline assessment.

Percent areal cover of woody vegetation (forested and/or scrub-shrub plant communities) will be evaluated through the use of point-intercept sampling methodology. Using this methodology, a tape will be extended between two permanent markers at each end of an established transect. Trees and shrubs intercepted by the tape will be identified, and the intercept distance recorded. Percent cover by species will then be calculated by adding the intercept distances and expressing them as a total proportion of the tape length.

The established vegetation sampling locations will be monitored and compared to the baseline data during each performance monitoring event to aid in determining the success of plant establishment. Percent survival of shrubs and trees will be evaluated in a 10-foot-wide strip along each established transect. The species and location of all

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shrubs and trees within this area will be recorded at the time of the baseline assessment and will be evaluated during each monitoring event to determine percent survival.

9.3 Photo Documentation

Locations will be established within the mitigation area from which panoramic photographs will be taken throughout the monitoring period. These photographs will document general appearance and relative changes within the plant community. Review of the photos over time will provide a semi-quantitative representation of success of the planting plan. Vegetation sampling transect/plot/quadrat and photo-point locations will be shown on a map and submitted with the baseline assessment report and yearly performance monitoring reports.

9.4 Wildlife

Birds, mammals, reptiles, amphibians, and invertebrates observed in the wetland and buffer areas (either by direct or indirect means) will be identified and recorded during scheduled monitoring events, and at any other times observations are made. Direct observations include actual sightings, while indirect observations include tracks, scat, nests, song, or other indicative signs. The kinds and locations of the habitat with greatest use by each species will be noted, as will any breeding or nesting activities.

9.5 Water Quality

Water quality will be assessed qualitatively; unless it is evident there is a serious problem. In such an event, water quality samples will be taken and analyzed in a laboratory for suspected parameters. Qualitative assessments of water quality include:

- Oil sheen or other surface films,
- Abnormal color or odor of water,
- Stressed or dead vegetation or aquatic fauna,
- Turbidity, and
- Absence of aquatic fauna.

9.6 Site Stability

Observations will be made of the general stability of slopes and soils in the mitigation areas during each monitoring event. Any erosion of soils or slumping of slopes will be recorded and corrective measures will be taken.

CHAPTER 10. MAINTENANCE AND CONTINGENCY

Maintenance reviews will be performed according to the schedule presented in **Table 3** to address any conditions that could jeopardize the success of the mitigation area. Established performance standards for the project will be compared to the monitoring results to judge the success of the mitigation project. If there is a significant problem with achieving the performance standards, the Bond-holder shall work with the City of Monroe to develop a Contingency Plan. Contingency plans can include, but are not limited to: additional plant installation; erosion control; and plant substitutions of type, size, quantity, and location. Such Contingency Plan shall be submitted to the City of Monroe by December 31 of any year when deficiencies are discovered. Contingency will include many of the items listed below and would be implemented if the performance standards are not met. Maintenance and remedial action on the site will

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be implemented immediately upon completion of the monitoring event, unless otherwise specifically indicated below.

M = Regular maintenance item; C = Contingency item

- During year one, replace all dead plant material. (M)
- Replace dead plants with the same species or a substitute species that meets the objectives of the mitigation plan, subject to the approval of the wetland biologist. (M)
- Re-plant area after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, poor soil, shade/sun conditions, wildlife damage, etc.). (C)
- Amend soil with topsoil or compost. (C)
- Remove/control weedy or exotic invasive plants (e.g., Scot's broom, reed canarygrass, Himalayan blackberry, purple loosestrife, Japanese knotweed, etc.) by manual or chemical means approved by the City. Use of herbicides or pesticides within the mitigation area would only be implemented if other measures failed or were considered unlikely to be successful and would require prior agency approval. All non-native vegetation must be removed and dumped off site (M & C).
- Weed trees and shrubs to the dripline and maintain a 3’ dia. mulch ring around trees and a 2’ dia. ring around shrubs at a depth of three inches (M).
- Remove trash and other debris from the mitigation areas twice a year (M).
- Repair or replace damaged structures including: fence or signs (M).

CHAPTER 11. PERFORMANCE SECURITY

Pursuant to MMC 20.05.130, a performance security device may be required by the City, the details of which shall be determined by the City.

CHAPTER 12. SUMMARY

The Garibaldi PRD Site is an approximately 18.22-acre assemblage of five parcels located in the City of Monroe. The Site contains one wetland (Wetland A) and one Type 5 stream (Stream 1). Other critical areas occur off-site that do not affect this Site. Wetland A rated as a City of Monroe Category III wetland requiring a standard buffer of 75 feet. Stream 1 is a Type 5 stream requiring a 50-foot standard buffer.

Westcott Homes plans to develop the Garibaldi PRD site with 90 single-family lots with interior circulation routes, open/recreation areas, and supporting utilities and stormwater facilities. Constraints to development included the presence of a vacant powerline easement across the center of Parcel A; sight-line issues in association with access roads to Chain Lake Road; and the presence of Wetland A within the parcels that have the only viable access to Chain Lake Road.

No direct impacts to the wetland or stream are proposed with this Project. No impacts to the Stream 1 buffers are proposed. However, the project is proposing buffer averaging for Wetland A in order to accommodate a viable Site Plan that meets all the requirements of the MMC.

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Approximately 900 square feet of wetland buffer will be reduced in order to accommodate a viable Site Plan. The area of buffer reduction will be replaced by 3,213 sf of enhanced buffer area. Buffer averaging will result in a net gain of 2,313 sf of buffer. All buffer replacement areas will be enhanced through the removal of invasive species and replacement of native species.

An additional 4,783 sf of wetland buffer will be temporarily impacted due to grading necessary for three (3) of the proposed residential lots. Buffer replacement areas that lack native vegetation in the existing condition will be enhanced to create a buffer area that is vegetated with a native plant community appropriate for the ecoregion.

The project proposes buffer replacement with enhancement to compensate for buffer functions and values lost through buffer reduction. The proposed buffer averaging plan will result in a net gain of 2,313 sf of buffer area. Restoration is proposed to mitigate for temporarily impacted areas resulting from grading activities.

The proposed mitigation will result in no net loss of critical area functions and values compared to existing conditions and will result in a net gain of 2,313 sf of buffer area. Long-term performance monitoring and maintenance will commence following mitigation construction completion.

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CHAPTER 13.REFERENCES

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FIGURES

Figure 1: Vicinity Map & Driving Directions
Figure 2: Site Overview and Parcel Map
Figure 3: NRCS Soils Map

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NW 1/4 SECTION 31, TOWNSHIP 28N, RANGE 7E. W.M.

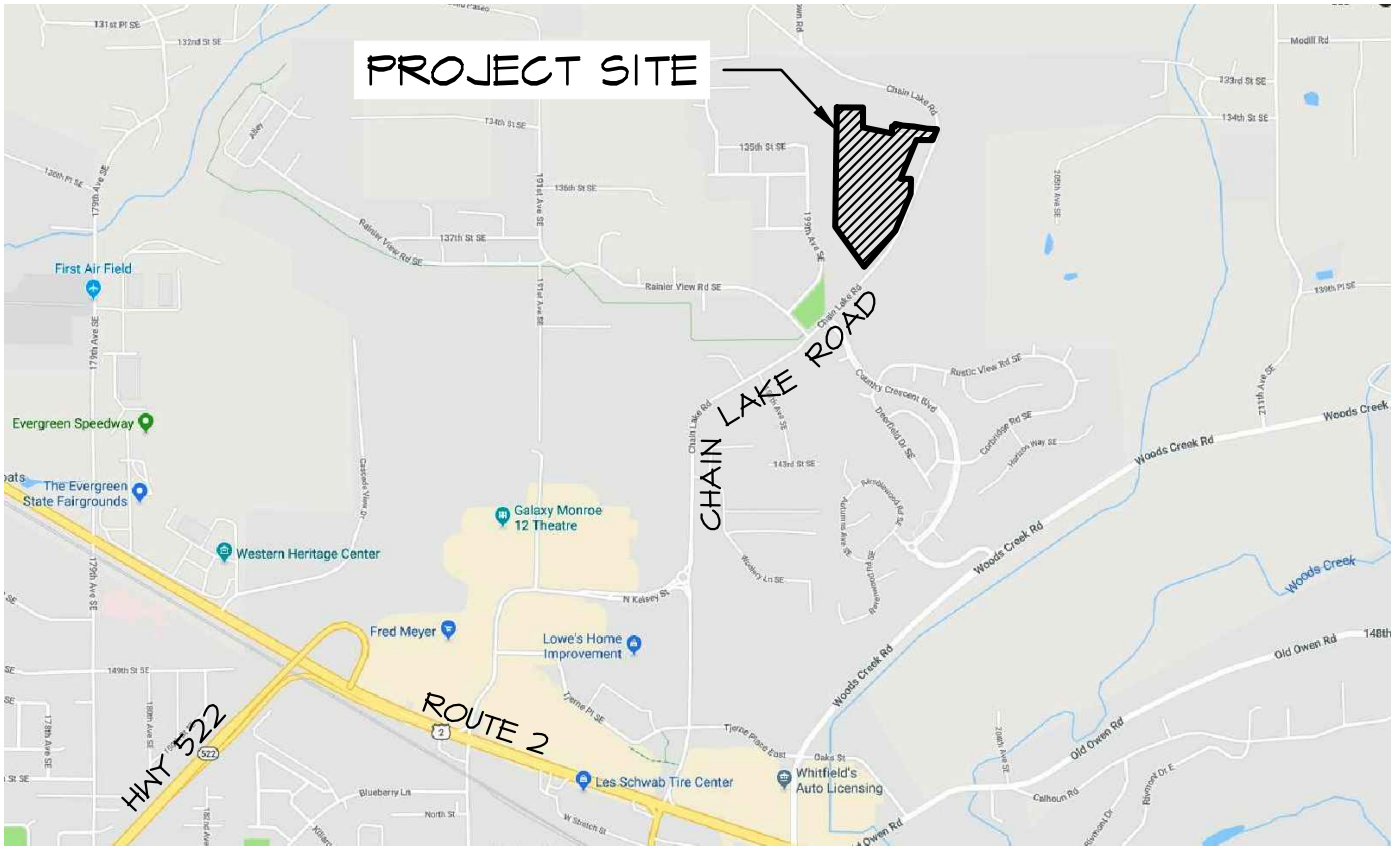


IMAGE SOURCE: GOOGLE MAPS, WWW.MAPS.GOOGLE.COM (ACCESSED 16 NOVEMBER 2018)

DRIVING DIRECTIONS:

1. FROM MONROE PLANNING AND DEVELOPMENT, HEAD NORTHEAST ON WEST MAIN STREET TOWARD VILLAGE WAY. CONTINUE FOR 0.6 MILES.
2. TURN LEFT ONTO S LEWIS STREET. CONTINUE FOR 0.2 MILES.
3. CONTINUE STRAIGHT ONTO 195TH AVENUE SE/CHAIN LAKE ROAD. CONTINUE FOR 2.0 MILES.
4. ARRIVE AT DESTINATION:

13424 CHAIN LAKE ROAD
MONROE, WASHINGTON 98272

NORTH

TALASAEA CONSULTANTS, INC.
Resource & Environmental Planning
15020 Bear Creek Road Northeast
Woodinville, Washington 98077
Bus (425)861-7550 - Fax (425)861-7549

FIGURE #1

VICINITY MAP & DRIVING DIRECTIONS
GARIBALDI PRD
MONROE, WASHINGTON

DESIGN	DRAWN	PROJECT
	FH	1684

SCALE: NTS
DATE: 11-28-2018
REVISED: 2-15-2021

1

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NW 1/4 SECTION 31, TOWNSHIP 28N, RANGE 7E. W.M.



IMAGE SOURCE: SNOHOMISH COUNTY PDS; <HTTP://WWW5.KINGCOUNTY.GOV/IMAP/VIEWER.HTM?MAPSET=KC PROPERTY> (ACCESSED 3 FEB 2015)

PARCEL LEGEND

KEY	PARCEL NUMBER	KEY	PARCEL NUMBER
A	280731002008OO	D	280731002028OO
B	280731002016OO	E	280731002029OO
C	280731002039OO		

NORTH
N.T.S.

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FIGURE #2

SITE OVERVIEW AND PARCEL MAP
GARIBALDI PRD
MONROE, WASHINGTON

DESIGN	DRAWN	PROJECT
	FH	1684

SCALE: NTS
DATE: 11-28-2018
REVISED: 2-15-2021

2

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NW 1/4 SECTION 31, TOWNSHIP 28N, RANGE 7E. W.M.



LEGEND

TYPE	DESCRIPTION, SLOPES
72	TOKUL MEDIAL LOAM, 8 TO 15 PERCENT SLOPES.
73	TOKUL MEDIAL LOAM, 0 TO 8 PERCENT SLOPES.

SOURCE: SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE, WEB SOIL SURVEY. AVAILABLE ONLINE AT http://websoilsurvey.nrcs.usda.gov/. (ACCESSED (16 NOVEMBER 2018).

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N.T.S.

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FIGURE #3

NRCS SOILS MAP
GARIBALDI PRD
MONROE, WASHINGTON

DESIGN	DRAWN	PROJECT
	FH	1684

SCALE: NTS
DATE: 11-28-2018
REVISED: 2-15-2021

3

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APPENDIX A

Wetland Delineation Data Sheets,
Talasaea Consultants

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

Project/Site: TAL-1684 City/County: Monroe Sampling Date: 10-12-2018

Applicant/Owner: Melanie Davies State: WA Sampling Point: TP-1

Investigator(s): RT Section, Township, Range: NW 1/4 S31, T28N, R7E.

Landform (hillslope, terrace, etc.): drainage swale Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): A Lat: 47.8735 Long: -121.9626 Datum: NAD 83

Soil Map Unit Name: Tokul gravelly medial loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: Wetland point associated with Wetland A. Located 4 feet southeast of flag A-8. Within small swale within the wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m)			
1. *Rubus spectabilis*	20	Yes	FAC
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 1m)			
1. *Lysichiton americanus*	5	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: 3m)			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Hydrophytic Vegetation criteria met.

SOIL

Sampling Point: TP-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10YR 2/1	100	-	-	-	-	loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☒ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1 (**except MLRA 1**))
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Hydric soil criteria met. No redox, but black mineral soils without a break to 20" so assumed hydric given the other 2 parameters. These dark soils can also be typical of some forest settings where leaf accumulation is high.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1)(**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**))
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6(**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1

Water Table Present? Yes ☒ No ☐ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Wetland Hydrology criteria met.

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

Project/Site: TAL-1684 City/County: Monroe Sampling Date: 10-12-2018

Applicant/Owner: Melanie Davies State: WA Sampling Point: TP-2

Investigator(s): RT Section, Township, Range: NW 1/4 S31, T28N, R7E.

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 8

Subregion (LRR): A Lat: 47.8735 Long: -121.9623 Datum: NAD 83

Soil Map Unit Name: Tokul gravelly medial loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland point associated with Wetland A. Located 4 feet northeast of flag A-8.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	70	Yes	FAC
2. *Acer macrophyllum*	30	Yes	FACU
3.			
4.			
	100 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m)			
1. *Rubus spectabilis*	80	Yes	FAC
2.			
3.			
4.			
5.			
	80 = Total Cover		
Herb Stratum (Plot size: 1m)			
1. *Polystichum munitum*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: 3m)			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Hydrophytic vegetation criteria not met.

SOIL

Sampling Point: TP-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
1-20	10YR 3/3	100	-	-	-	-	loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1 (**except MLRA 1**))
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Hydric soil criteria not met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1)(**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**))
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6(**LRR A**)
- ☐Frost-Heave Hummocks (D7)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 14

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Wetland hydrology not met. Saturation deeper than 12".

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

Project/Site: TAL-1684 City/County: Monroe Sampling Date: 10-12-2018

Applicant/Owner: Melanie Davies State: WA Sampling Point: TP-3

Investigator(s): RT Section, Township, Range: NW 1/4 S31, T28N, R7E.

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): None Slope (%): 2

Subregion (LRR): A Lat: 47.8747 Long: -121.9638 Datum: NAD 83

Soil Map Unit Name: Tokul gravelly medial loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland point located in pasture southwest of the barn.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	20	Yes	FAC
2.			
3.			
4.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m)			
1. *None*			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 1m)			
1. *Juncus effusus*	40	Yes	FACW
2. *Agrostis capillaris*	50	Yes	FAC
3. *Lotus corniculatus*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 3m)			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Hydrophytic vegetation criteria met.

SOIL

Sampling Point: TP-3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
1-13	10YR 3/3	100	-	-	-	-	loam	
13-20	10YR 4/3	100	-	-	-	-	silt loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1 (**except MLRA 1**))
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Hydric soil criteria not met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1)(**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**))
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6(**LRR A**)
- ☐Frost-Heave Hummocks (D7)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Wetland hydrology criteria not met.

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

Project/Site: TAL-1684 City/County: Monroe Sampling Date: 10-12-2018

Applicant/Owner: Melanie Davies State: WA Sampling Point: TP-4

Investigator(s): RT Section, Township, Range: NW 1/4 S31, T28N, R7E.

Landform (hillslope, terrace, etc.): Glacial till plain Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): A Lat: 47.8749 Long: -121.9615 Datum: NAD 83

Soil Map Unit Name: Tokul gravelly medial loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland point located east of barn in horse paddock near eastern fenceline at edge of woods.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m)			
1. *None*			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 1m)			
1. *Ranunculus repens*	90	Yes	FAC
2. *Phalaris arundinacea*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 3m)			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Hydrophytic vegetation criteria met. Selective grazing by horses and hoof pan compaction may be favoring hydrophytic species (non-native weedy species).

SOIL

Sampling Point: TP-4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100	-	-	-	-	loam	
10-20	10YR 3/3	100	-	-	-	-	silt loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1 (**except MLRA 1**))
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Hydric soil criteria not met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1)(**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**))
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6(**LRR A**)
- ☐Frost-Heave Hummocks (D7)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Wetland hydrology criteria not met.

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

Project/Site: TAL-1684 City/County: Monroe Sampling Date: 1-27-2021

Applicant/Owner: Melanie Davies State: WA Sampling Point: TP-B-2

Investigator(s): KM Section, Township, Range: NW 1/4 S31, T28N, R7E.

Landform (hillslope, terrace, etc.): Glacial till plain Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): A Lat: 47.873154 Long: -121.962989 Datum: NAD 83

Soil Map Unit Name: Tokul gravelly medial loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Test plot located approximately 5 feet north of existing driveway, within constructed roadside ditch. While the test plot meets criteria for Hydrophytic vegetation (primarily noxious weeds) and marginal hydric soils, it does not meet wetland hydrology criteria even during significantly wetter than normal climatic conditions during the winter months.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum*	80	Yes	FACU
2.			
3.			
4.			
	80 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m)			
1. *Rubus armeniacus*	30	Yes	FAC
2.			
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 1m)			
1. *Phalaris arundinacea*	90	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 3m)			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Hydrophytic vegetation criteria met. This vegetation community (primarily Himalayan blackberry and reed canarygrass) are adapted to heavily disturbed environments, like this ditch along the driveway to the existing residence. Because these species are invasive and tend to exhibit monocultural characteristics, these species are not indicative of wetland conditions in this particular sample plot.

SOIL

Sampling Point: TP-B-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100	-	-	-	-	SLo	
3-7	10YR 3/2	90	10YR 3/4	10	C	M	SLo	
7-14	10YR 3/2	100	-	-	-	-	SLo	
14-20	10RY 3/6	100	-	-	-	-	SiLo	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1 (**except MLRA 1**))
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Hydric soil indicator F3 - Depleted Matrix criteria met. However, it is unusual to see a high-chroma 10YR 3/6 layer underlying the depleted 10YR 3/2 layer, and this suggests that some historical soil disturbance has occurred (likely due to the construction of the ditch where this plot is located). Water naturally concentrates in this location from driveway runoff and may have formed the hydric soil indicator over a layer that historically had upland/mesic soil characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1)(**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B)**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6(**LRR A**)
- ☐Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 29

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Saturation at 29 inches below surface - too deep to qualify for wetland hydrology, despite significantly wetter than normal climatic conditions during the wettest months of the year.

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

Project/Site: TAL-1684 City/County: Monroe Sampling Date: 1-27-2021

Applicant/Owner: Melanie Davies State: WA Sampling Point: TP-B-1

Investigator(s): KM Section, Township, Range: NW 1/4 S31, T28N, R7E.

Landform (hillslope, terrace, etc.): Glacial till plain Local relief (concave, convex, none): none Slope (%): 2-5

Subregion (LRR): A Lat: 47.872859 Long: -121.963024 Datum: NAD 83

Soil Map Unit Name: Tokul gravelly medial loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Test plot located approximately 100 feet south of driveway to 13704 Chain Lake Road residence. Climatic conditions are wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum*	20	Yes	FACU
2. *Populus balsamifera*	30	Yes	FAC
3.			
4.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m)			
1. *Rubus armeniacus*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 1m)			
1. *Ranunculus repens*	70	Yes	FAC
2. *Poa pratensis*	25	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: 3m)			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Hydrophytic vegetation criteria met. However, this vegetation community has been managed as pasture associated with the historical property use as a farm.

SOIL

Sampling Point: TP-B-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100	-	-	-	-	SLo	
3-20	10YR 3/2	90	10YR 3/4	10	C	M	SLo	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1 (**except MLRA 1**))
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Hydric soil criteria F6 - Redox dark surface met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1)(**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B)**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6(**LRR A**)
- ☐Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 31

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Wetland hydrology criteria not met. Saturation present, but too deep to qualify for wetland hydrology criteria, despite significantly wetter than normal conditions during the wettest winter months.

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

Project/Site: TAL-1684 City/County: Monroe Sampling Date: 1-27-2021

Applicant/Owner: Melanie Davies State: WA Sampling Point: TP-X

Investigator(s): KM Section, Township, Range: NW 1/4 S31, T28N, R7E.

Landform (hillslope, terrace, etc.): Glacial till plain Local relief (concave, convex, none): none Slope (%): 2-5

Subregion (LRR): A Lat: 47.872555 Long: -121.963546 Datum: NAD 83

Soil Map Unit Name: Tokul gravelly medial loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Test plot located approximately 50 feet north of residence located at 13802 Chain Lake Road, within cedar grove. Wetland criteria not met, despite significantly wetter than normal climatic conditions during the wettest winter months.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Thuja plicata*	100	Yes	FAC
2.			
3.			
4.			
	100 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m)			
1. *None*			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 1m)			
1. *Polystichum munitum*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: 3m)			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: Hydrophytic vegetation criteria not met - dominance test not greater than 50%.

SOIL

Sampling Point: TP-X

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 3/2	100	-	-	-	-	SLo	
13-20	10YR 3/4	80	10YR 3/6	20	C	M	SLo	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1 (**except MLRA 1**))
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: mottled layer located too deep within soil strata to qualify for any hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1)(**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B)**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6(**LRR A**)
- ☐Frost-Heave Hummocks (D7)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No indication of wetland hydrology, despite significantly wetter than normal climatic conditions.

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

Project/Site: TAL-1684 City/County: Monroe Sampling Date: 1-27-2021

Applicant/Owner: Melanie Davies State: WA Sampling Point: TP-Y

Investigator(s): KM Section, Township, Range: NW 1/4 S31, T28N, R7E.

Landform (hillslope, terrace, etc.): Glacial till plain Local relief (concave, convex, none): none Slope (%): 5

Subregion (LRR): A Lat: 47.872657 Long: -121.963240 Datum: NAD 83

Soil Map Unit Name: Tokul gravelly medial loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Test plot located approximately 50 feet to the northeast of TP-X, within a swale area dominated by creeping buttercup. Test plot does not meet wetland criteria, despite significantly wetter than normal climatic conditions during the wettest winter months.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Thuja plicata*	20	Yes	FAC
2.			
3.			
4.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m)			
1. *Rubus armeniacus*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 1m)			
1. *Polystichum munitum*	5	No	FACU
2. *Ranunculus repens*	80	Yes	FAC
3. *Mahonia nervosa*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 3m)			
1. *None*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Hydrophytic vegetation criteria met.

SOIL

Sampling Point: TP-Y

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YWR 3/2	100	-	-	-	-	SLo	
9-12	10YR 3/2	90	10YR 3/4	10	C	M	SLo	
12-20	10YR 3/4	80	10YR 3/3	20	D	M	SLo	faint redox deplettions

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1 (**except MLRA 1**))
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Hydric soil indicators not met. Redoximorphic features would have to be located within 8 inches of the soil surface to qualify.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1)(**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B)**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6(**LRR A**)
- ☐Frost-Heave Hummocks (D7)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No indication of wetland hydrology - no saturation present despite significantly wetter than normal climatic conditions.

APPENDIX B

Wetland Rating Forms
Washington State Department of Ecology Wetland Rating System for Western Washington (2014)

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Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 10-12-2018

Rated by Jennifer Marriott Trained by Ecology? X Yes ___No Date of training_____

HGM Class used for rating Slope Wetland has multiple HGM classes?___Y __X__N

NOTE: **Form is not complete without the figures requested** *(figures can be combined)*.
Source of base aerial photo/map _____

OVERALL WETLAND CATEGORY III (based on functions X or special characteristics___)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 23 - 27

_____**Category II** – Total score = 20 - 22

__X__**Category III** – Total score = 16 - 19

_____**Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality			Hydrologic			Habitat			
	Circle the appropriate ratings									
Site Potential	H	M	**L**	H	M	**L**	H	**M**	L	
Landscape Potential	H	**M**	L	H	M	**L**	H	M	**L**	
Value	**H**	M	L	H	**M**	L	**H**	M	L	**TOTAL**
Score Based on Ratings	6			4			6			16

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	**I** **II**
Wetland of High Conservation Value	**I**
Bog	**I**
Mature Forest	**I**
Old Growth Forest	**I**
Coastal Lagoon	**I** **II**
Interdunal	**I** **II** **III** **IV**
None of the above	X

Wetland name or number A

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

   NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

   1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

   NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

   NO – go to 3 **YES** – The wetland class is **Flats**
   *If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
   ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

   NO – go to 4 **YES –** The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
   _X_The wetland is on a slope (*slope can be very gradual*),
   _X_The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
   _X_The water leaves the wetland **without being impounded**.

   NO – go to 5 **YES** – The wetland class is **Slope**

   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
   ___The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
   ___The overbank flooding occurs at least once every 2 years.

Wetland name or number A

NO – go to 6 **YES** – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number A

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: *(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less points = 3 Slope is > 1%-2% points = 2 Slope is > 2%-5% points = 1 Slope is greater than 5% points = 0	1
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*: Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area points = 6 Dense, uncut, herbaceous plants > ½ of area points = 3 Dense, woody, plants > ½ of area points = 2 Dense, uncut, herbaceous plants > ¼ of area points = 1 Does not meet any of the criteria above for plants points = 0	3
Total for S 1 Add the points in the boxes above	4

Rating of Site Potential If score is: ___ **12 = H** ___ **6-11 = M** X **0-5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources _____ Yes = 1 No = 0	0
Total for S 2 Add the points in the boxes above	1

Rating of Landscape Potential If score is: X **1-2 = M** ___ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list*. Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? *Answer YES if there is a TMDL for the basin in which unit is found.* Yes = 2 No = 0	2
Total for S 3 Add the points in the boxes above	4

Rating of Value If score is: X **2-4 = H** ___ **1 = M** ___ **0 = L** *Record the rating on the first page*

Wetland name or number A

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. *Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.*	
Dense, uncut, **rigid** plants cover > 90% of the area of the wetland — points = 1	
All other conditions — points = 0	0

Rating of Site Potential If score is: ___ **1 = M** X **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

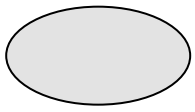
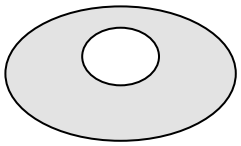
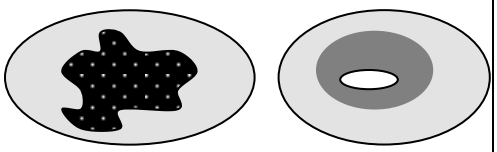
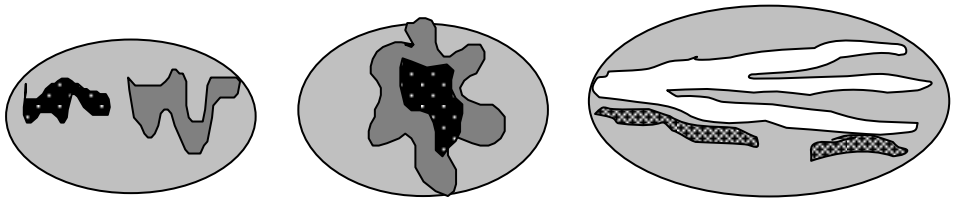
Rating of Landscape Potential If score is: ___ **1 = M** X **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:	
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2	1
Surface flooding problems are in a sub-basin farther down-gradient — points = 1	
No flooding problems anywhere downstream — points = 0	
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 — Add the points in the boxes above	1

Rating of Value If score is: ___ **2-4 = H** X **1 = M** ___ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number A

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.* ____Aquatic bed — 4 structures or more: points = 4 _X_Emergent — 3 structures: points = 2 ____Scrub-shrub (areas where shrubs have > 30% cover) — 2 structures: points = 1 _X_Forested (areas where trees have > 30% cover) — 1 structure: points = 0 *If the unit has a Forested class, check if:* _X_The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	2
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*). ____Permanently flooded or inundated — 4 or more types present: points = 3 ____Seasonally flooded or inundated — 3 types present: points = 2 ____Occasionally flooded or inundated — 2 types present: points = 1 _X_Saturated only — 1 type present: points = 0 _X_Permanently flowing stream or river in, or adjacent to, the wetland ____Seasonally flowing stream in, or adjacent to, the wetland ____**Lake Fringe wetland** — **2 points** ____**Freshwater tidal wetland** — **2 points**	1
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species.* ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*** If you counted: > 19 species — points = 2 5 - 19 species — points = 1 < 5 species — points = 0	1
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*  **None** = 0 points  **Low** = 1 point  **Moderate** = 2 points All three diagrams in this row are **HIGH** = 3points 	2

Wetland name or number A

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). X Standing snags (dbh > 4 in) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* ____At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	2
Total for H 1 Add the points in the boxes above	8

Rating of Site Potential If score is:___**15-18 = H** X **7-14 = M** ___**0-6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat___ **+** [(% moderate and low intensity land uses)/2]___ **=** _____% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat___ **+** [(% moderate and low intensity land uses)/2]___ **=** _____% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	-1

Rating of Landscape Potential If score is:___**4-6 = H** ___**1-3 = M** X **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 X It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	2

Rating of Value If score is: X **2 = H** ___**1 = M** ___**0 = L** *Record the rating on the first page*

Wetland name or number A

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

X **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

X **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

— **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

X **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

APPENDIX C

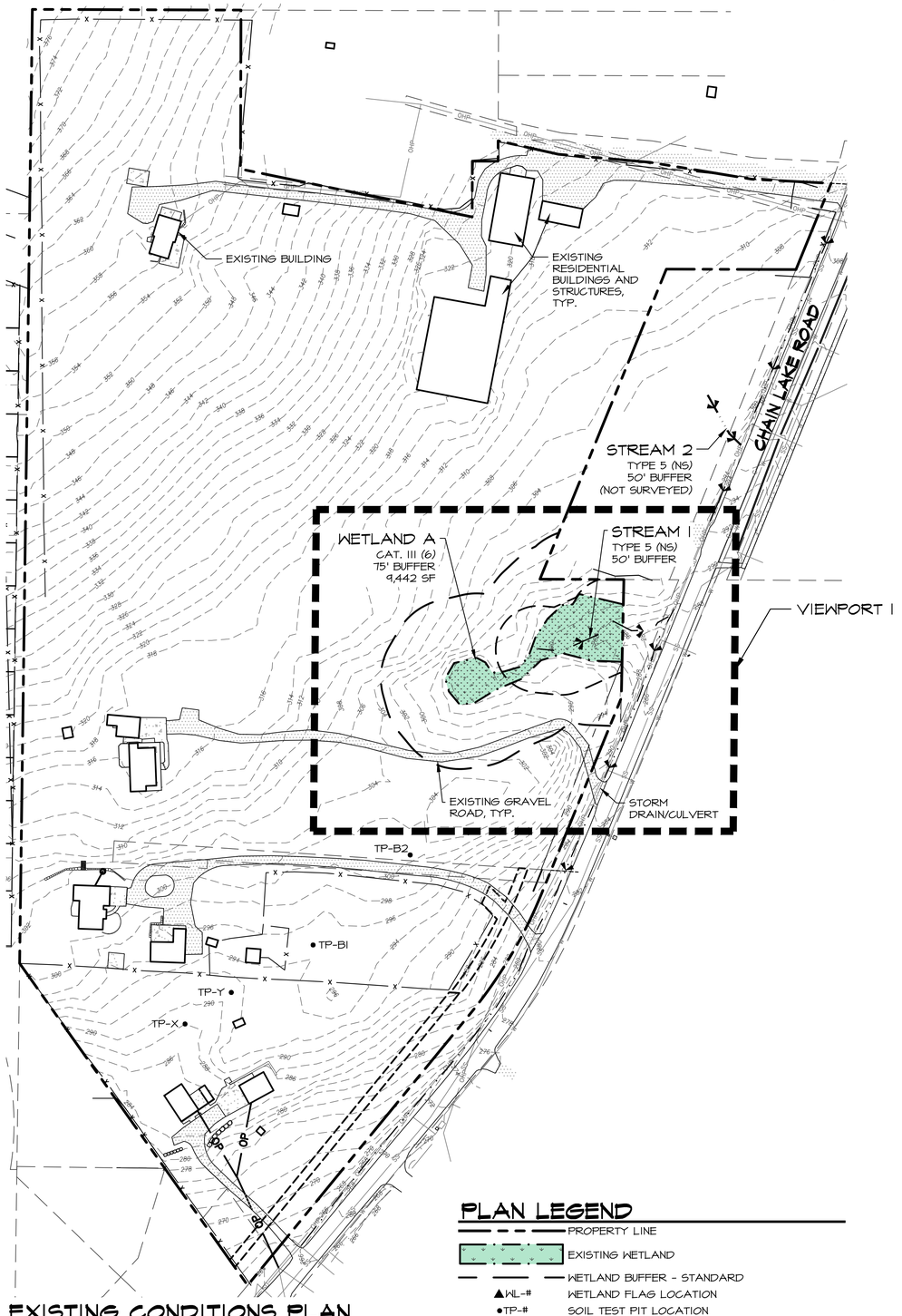
Critical Areas Mitigation Plans

(full-size 22”x34” drawings)

Sheet W1.0: Existing Conditions Plan
Sheet W1.1: Proposed Site Plan, Impacts & Mitigation Overview Plan

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NW 1/4 SECTION 31, TOWNSHIP 28N, RANGE 7E, W.M.



EXISTING CONDITIONS PLAN

GRAPHIC SCALE (IN FEET)
0 40 80 160
SCALE: 1"=80'

NORTH



VIEWPORT 1

SCALE: 1"=40'

PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND
- WETLAND BUFFER - STANDARD
- ▲WL-# WETLAND FLAG LOCATION
- •TP-# SOIL TEST PIT LOCATION
- STREAM CENTERLINE
- STREAM BUFFER
- OHWM-# STREAM OHWM FLAG LOCATION
- DITCH CENTERLINE
- 316 EXISTING CONTOUR
- EXISTING UTILITY EASEMENT

VICINITY MAP

NTS



SOURCE: GOOGLE MAPS; WWW.MAPS.GOOGLE.COM (ACCESSED 11/15/2018)

NORTH

CONTACTS

PROPERTY OWNER/APPLICANT

NAME:	GARIBALDI LAKE, LLC.
ADDRESS:	1010 MARKET STREET KIRKLAND WA, 98033
PHONE:	(425) 576-9340
CONTACT:	MELANIE DAVIES
EMAIL:	MDAVIES@WESTCOTTHOMES.COM

SURVEYOR

NAME:	MEAD GILMAN LAND SURVEYORS
ADDRESS:	P.O. BOX 289, WOODINVILLE, WA 98072
PHONE:	(425) 486-1252
CONTACT:	CHRISTOPHER SHANE BARNES, PLS
EMAIL:	MDAVIES@WESTCOTTHOMES.COM

ENGINEER

NAME:	CPH CONSULTANTS, LLC.
ADDRESS:	KIRKLAND 405 CORPORATE CENTER BUILDING W, 11321-B NE 120TH ST, KIRKLAND, WA 98034
PHONE:	(425) 285-2340
CONTACT:	MATT HOUGH, PE
EMAIL:	MATT@CPHCONSULTANTS.COM

ENVIRONMENTAL CONSULTANT

NAME:	TALASAEA CONSULTANTS, INC.
ADDRESS:	15020 BEAR CREEK RD. NE WOODINVILLE, WA 98077
PHONE:	(425) 861-7550
CONTACT:	ANN OLSEN, SENIOR PROJECT MANAGER
EMAIL:	AOLSEN@TALASAEA.COM
CONTACT:	KELLEN MALONEY, ECOLOGIST
EMAIL:	KMALONEY@TALASAEA.COM

SHEET INDEX

SHEET NUMBER	SHEET TITLE
W1.0	EXISTING CONDITIONS PLAN
W1.1	SITE PLAN, IMPACTS & MITIGATION OVERVIEW PLAN

NOTES

1. SURVEY PROVIDED BY MEAD GILMAN LAND SURVEYORS, P.O. BOX 289, WOODINVILLE, WA 98072, (425) 486-1252.
2. SITE PLAN PROVIDED BY CPH CONSULTANTS, 11431 WILLOWS RD. NE, SUITE 120 REDMOND, WA 98052, (425) 285-2390.
3. SOURCE DRAWING WAS MODIFIED BY TALASAEA CONSULTANTS FOR VISUAL ENHANCEMENT.
4. THIS PLAN IS AN ATTACHMENT TO THE CRITICAL AREAS REPORT PREPARED BY TALASAEA CONSULTANTS IN MARCH, 2021.

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

TALASAEA CONSULTANTS, INC.
Resource & Environmental Planning
15020 Bear Creek Road Northeast - Woodinville, Washington 98077
Bus (425) 861-7550 - Fax (425) 861-7549

CRITICAL AREAS CONCEPTUAL MITIGATION PLAN
EXISTING CONDITIONS PLAN
GARIBALDI PRD
MONROE, WASHINGTON

Revisions	Date	By
CITY COMMENTS	3-3-21	MB

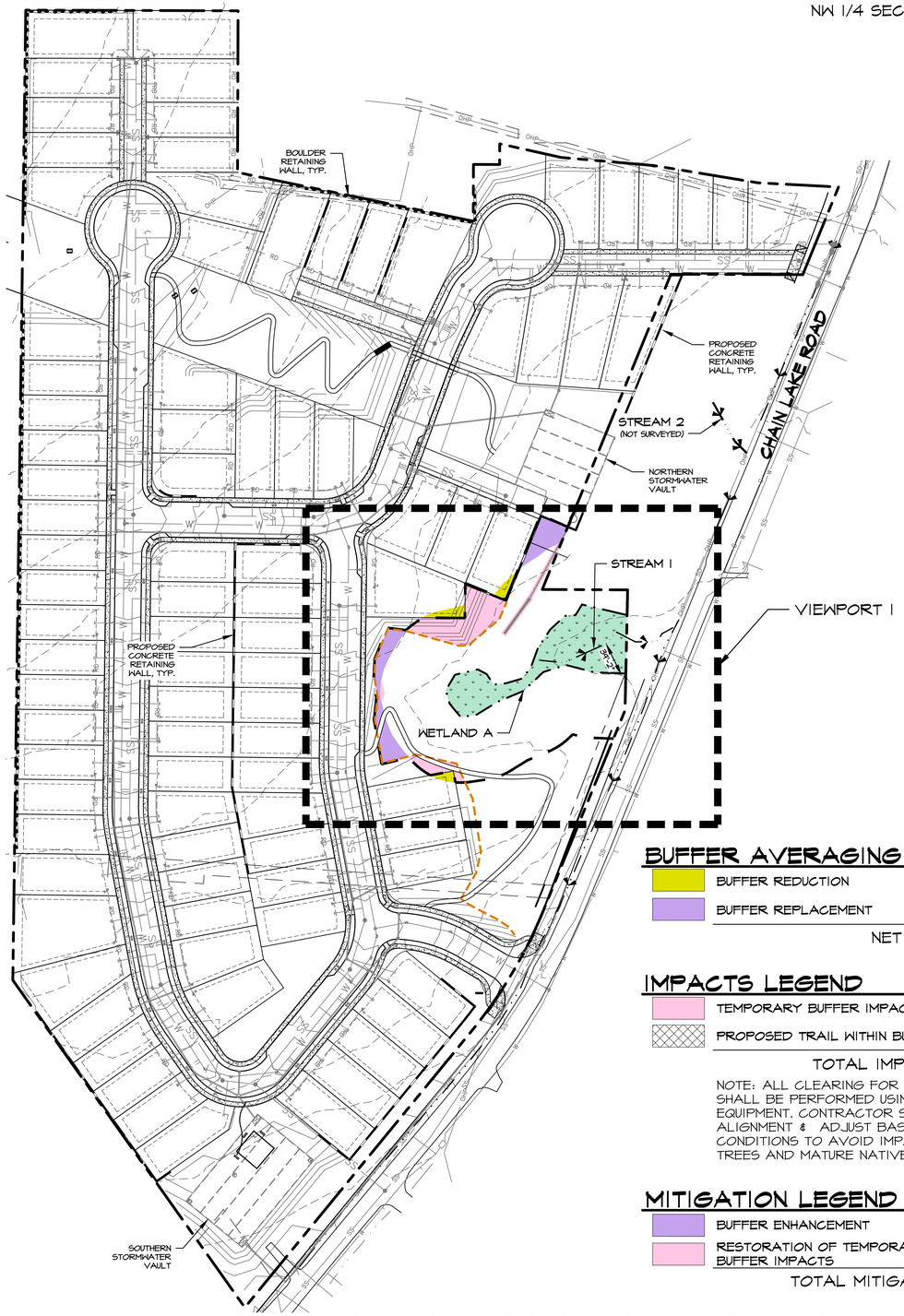
Date 12-4-2018
Scale AS SHOWN
Designed KM
Drawn FH
Checked AO
Approved BS

Project #1684

Sheet # W1.0

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NW 1/4 SECTION 31, TOWNSHIP 28N, RANGE 7E, W.M.



BUFFER AVERAGING LEGEND

	BUFFER REDUCTION	900 SF
	BUFFER REPLACEMENT	3,213 SF
	NET GAIN:	2,313 SF

IMPACTS LEGEND

	TEMPORARY BUFFER IMPACT	4,783 SF
	PROPOSED TRAIL WITHIN BUFFER	970 SF
	TOTAL IMPACTS:	5,753 SF

NOTE: ALL CLEARING FOR TRAIL WITHIN BUFFER SHALL BE PERFORMED USING HAND-OPERATED EQUIPMENT. CONTRACTOR SHALL VERIFY ALIGNMENT & ADJUST BASED ON FIELD CONDITIONS TO AVOID IMPACTING SIGNIFICANT TREES AND MATURE NATIVE SHRUBS.

MITIGATION LEGEND

	BUFFER ENHANCEMENT	3,213 SF
	RESTORATION OF TEMPORARY BUFFER IMPACTS	4,783 SF
	TOTAL MITIGATION:	7,996 SF

PROPOSED SITE PLAN, IMPACTS AND MITIGATION OVERVIEW PLAN

GRAPHIC SCALE (IN FEET)
0 40 80 160
SCALE: 1"=80'

NORTH

PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND
- STREAM CENTERLINE
- CRITICAL AREAS BUFFER/2-BOARD FENCE
- CRITICAL AREA TRACT SIGNS
- DITCH CENTERLINE
- EXISTING UTILITY EASEMENT
- GRADING LIMIT LINE

CANDIDATE PLANT LIST

TREES

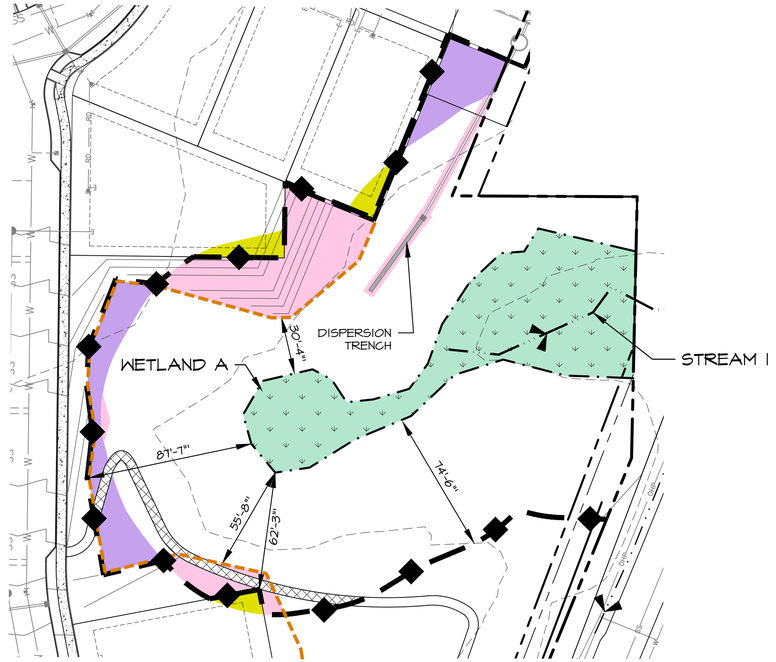
SCIENTIFIC NAME	COMMON NAME
ACER CIRCINATUM	VINE MAPLE
CORYLUS CORNUTA	WESTERN HAZELNUT
FRANGULA PURSHIANA	CASCARA
PSEUDOTSUGA MENZIESII	DOUGLAS FIR
THUJA PLICATA	WESTERN REDCEDAR

SHRUBS

SCIENTIFIC NAME	COMMON NAME
OEMLERIA CERASIFORMIS	INDIAN PLUM
ROSA GYMNOCARPA	BALDHIP ROSE
RUBUS PARVIFLORUS	THIMBLEBERRY
SAMBUCUS RACEMOSA	RED ELDERBERRY
SYMPHORICARPOS ALBUS	SNOWBERRY

GROUNDCOVERS

SCIENTIFIC NAME	COMMON NAME
GAULTHERIA SHALLON	SALAL
POLYSTICHUM MUNITUM	WESTERN SWORD FERN



VIEWPORT 1

SCALE: 1"=40'

NOTES

1. SURVEY PROVIDED BY MEAD GILMAN LAND SURVEYORS, P.O. BOX 289, WOODINVILLE, WA 98072, (425) 486-1252.
2. SITE PLAN PROVIDED BY CPH CONSULTANTS, 11431 WILLOWS RD. NE, SUITE 120 REDMOND, WA 98052, (425) 285-2390.
3. SOURCE DRAWING WAS MODIFIED BY TALASAEA CONSULTANTS FOR VISUAL ENHANCEMENT.
4. THIS PLAN IS AN ATTAGHMENT TO THE CRITICAL AREAS REPORT PREPARED BY TALASAEA CONSULTANTS IN MARCH, 2021.

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

TALASAEA CONSULTANTS, INC.
Resource & Environmental Planning
10020 Bear Creek Road Northeast - Woodinville, Washington 98077
Bus (425) 861-7550 - Fax (425) 861-7549

CRITICAL AREAS CONCEPTUAL MITIGATION PLAN
PROPOSED SITE PLAN, IMPACTS AND MITIGATION OVERVIEW PLAN
GARIBALDI PRD
MONROE, WASHINGTON

Revisions	Date	By
CITY COMMENTS	3-3-21	MB

Date	12-4-2018
Scale	AS SHOWN
Designed	KM
Drawn	FH
Checked	AO
Approved	BS

Project #1684

Sheet # W1.1

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