

SECTION 1
EXECUTIVE SUMMARY

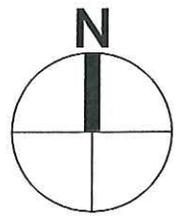
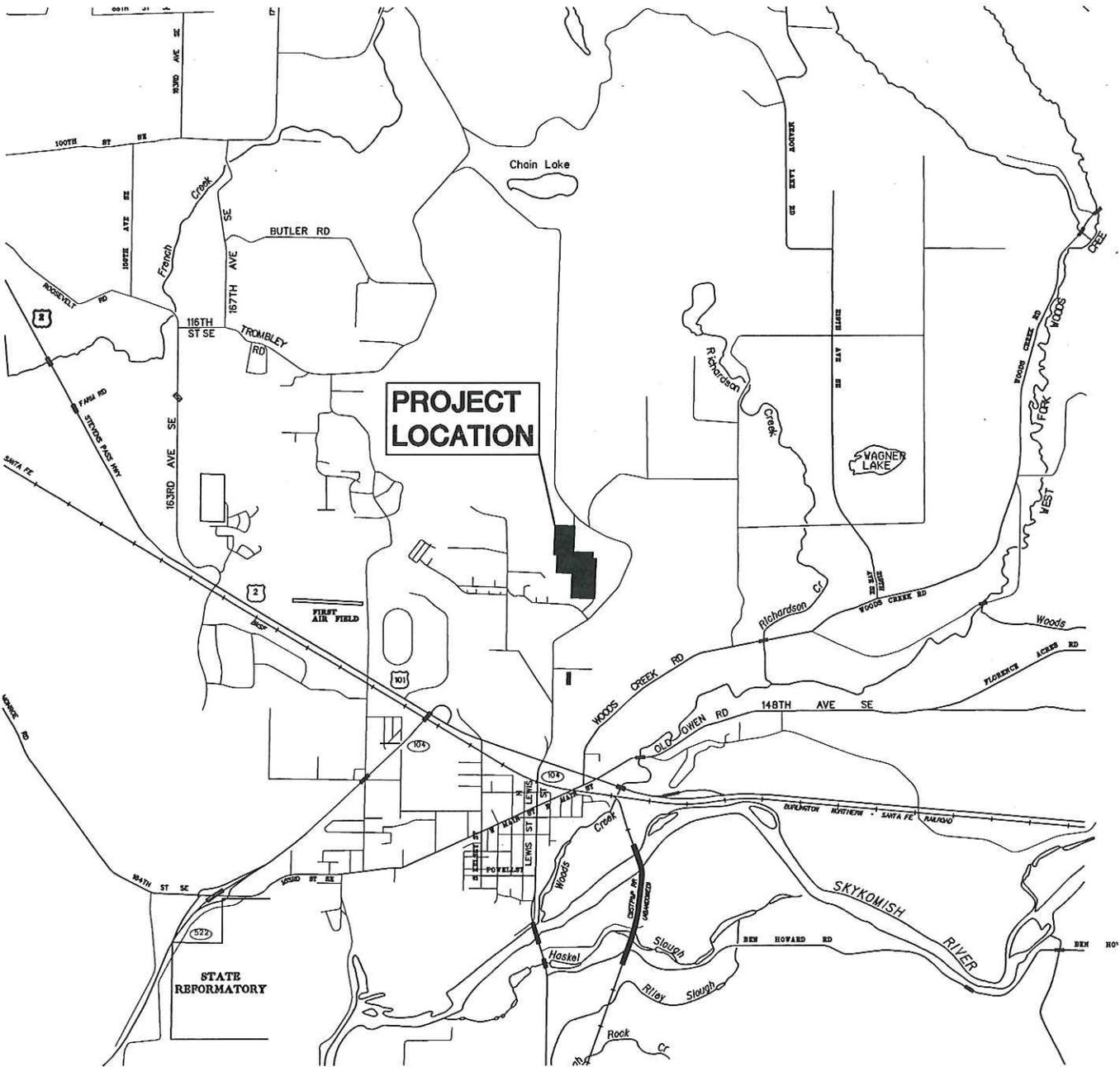
PROJECT OVERVIEW

The proposed project is to construct a subdivision of approximately 35 acres into 146 new single family residences, located at the existing terminus of 199th Avenue SE in the subdivision of Sinclair Heights in the City of Monroe. The project will clear, grade and construct roads, utility extensions and features and eventually single family residences on the lots. There is currently one building with associated driveways, which will be removed. The neighboring plat of "Sinclair Heights" has provided sewer, water, drainage, and dry utility stubs in the adjacent public road terminus called 199th Avenue SE. These stubs will be utilized in the construction of the project. The project is located in the east half of the SW ¼ of the NW ¼ of section 31, Township 28 North, Range 7 East, W.M. More specifically, the project occupies tax lot numbers 28073100201000, 28073100203300, 28073100203400, 280731002001100, 28073100204000, 01010300050200, and 01010300050100. A vicinity map has been included as **Figure 1** of this document.

The site is currently mostly forested and wooded with some pasturelands in the southern portions of the site. There is a utility easement in the middle of the site on a N-S bearing that has a gravel maintenance road within it. This gravel road connects to chain lake road to the north. The site has two drainage basins, one that drains to the south toward the Sinclair Heights project, and one to the north that drains overland to the north, towards Chain Lake Road. The south basin that contains the vast majority of the site, will contain a large detention pond. This pond will be located at the south end of the site and will be made completely of earthen berms and cut slopes. The pond will have 1' of dead storage for sediment removal and a biofiltration swale downstream of the detention pond. The biofiltration swale will discharge to a level spreader which will disperse flows into the adjacent wetland to the south of the site. The pond will be fitted with an emergency overflow structure, or "Bird Cage" that will be fitted on the drop T orifice release structure, and then a secondary emergency overflow spillway over the south bank of the detention pond. This secondary emergency overflow will be armored with quarry spalls and will also drain south into the adjacent wetland. The detention pond has been designed utilizing the latest version of WWHM3 continuous storm modeling software as per the 2005 DOE manual for existing versus proposed drainage release rates. The point of compliance is the location where the flows leave the proposed level spreader, which is the southernmost portion, and the point of the lowest elevation of the site.

The northern basin which is a very small portion of the site (3.6 acres of the total 35 acres), will be released to the north in its natural drainage course toward Chain Lake Road. Of the developed portion of the north basin, only the downhill 0.83 acres will be released to the north. The remainder of the plat in the north basin (2.77 acres) will be diverted to the south basin and into the proposed detention pond. This is due to the fact that the several utility (natural gas, domestic water) easements within this north basin make it very difficult to design a detention system within this north basin. And by over detaining in the south basin, within the existing detention pond, we are able to eliminate the need for two detention systems. Thus providing a more cost efficient storm drainage system, with much less maintenance for the city of Monroe and the homeowners association to operate and maintain. This 0.83 acres was chosen to keep the developed release rates .vs. pre-developed rates to the north basin within the guidelines of the 2005 DOE manual, thus meeting all Point of Compliance (POC) release rate criteria for the entire site, while utilizing one detention pond.

Site Soils below the topsoil layer consist of Vashon Lodgment Till. This material is an unsorted mixture of loose to medium dense, reddish brown to tan silty sand with gravel and scattered cobbles and boulders. Below depth ranging from approximately 2-4 feet, these sediments became dense to very dense and grayish tan. The Vashon lodgment till consists of an unsorted mixture of silt, sand and gravel that was deposited directly from basal, debris laden glacial ice during the Vashon Stade of the Fraser Glaciation, approximately 12,500 to 15,000 years ago. The high relative density characteristic of the lodgment till is due to its consolidation by the massive weight of ice from which it was deposited. These deposits are generally dense to very dense and are of extremely low permeability in their native undisturbed state.



ARC
Design
SJR
Drawn
10/11/12
Date
278-003-12
Project No.

S D A Civil Engineering
Project Management
Planning
1724 W. Marine View Drive, Suite 140; Everett, Washington 98201
Office: 425.486.6533 Fax: 425.486.6593 www.sdaengineers.com

EAGLEMONT
VICINITY MAP

NTS
Scale
1
Figure No.