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CRITICAL AREAS ASSESSMENT

Slocum Property

Woodinville, Washington

November 20, 2012
Revised March 12, 2013

RAEDEKE ASSOCIATES, INC.

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CITY OF WOODINVILLE
DEVELOPMENT SERVICES

Raedeke Associates, Inc.

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Wildlife Ecology
Landscape Architecture

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Title:	Critical Areas Assessment for the Slocum Property, Woodinville, Washington
Project Number:	2011-016-001
Date:	November 20, 2012 Revised March 12, 2013

Raedeke Associates, Inc.

Wetland Science
Wildlife Ecology
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1.0 INTRODUCTION

1.1 PURPOSE

This report documents the results of our field investigations and critical areas assessment of the Slocum property in Woodinville, Washington (Figure 1). The objectives of this study are to: (1) identify and delineate any portions of the property that could be classified as wetlands and (2) provide baseline biological information on the wildlife habitat on the Slocum property.

1.2 PROJECT LOCATION

The Slocum Property, is an approximately 4.5-acre property that consists of King County tax parcel 0622100090. The project site is located at the southwest corner of the intersection of NE 195th Street and 136th Avenue NE. Specifically the project site is within the SW ¼ of Section 3, Township 26 North, Range 5 East in the City of Woodinville, King County, Washington.

1.3 SITE DESCRIPTION

The property is undeveloped and lies at an elevation higher than the properties to the south. The site contains a mixed deciduous and coniferous forest plant community.

1.4 PROPOSED DEVELOPMENT PLAN

The proposal development would convert the site to 23 single-family residential lots with a common access from 136th Avenue NE. A stormwater detention vault would be located in the northeastern portion of the site.

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2.0 METHODS

2.1 DEFINITIONS AND METHODOLOGIES

Wetlands and streams are protected by federal law as well as by state and local regulations. Federal law (Section 404 of the Clean Water Act) prohibits the discharge of dredged or fill material into "Waters of the United States", including certain wetlands, without a permit from the U.S. Army Corps of Engineers (COE 2012). The COE makes the final determination as to whether an area meets the definition of a wetland and whether the wetland is under their jurisdiction.

The COE wetland definition was used to determine if any portions of the project area could be classified as wetland. A wetland is defined as an area "inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Federal Register 1986:41251).

We based our investigation upon the guidelines of the COE Wetlands Delineation Manual (Environmental Laboratory 1987), as further clarified in the Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys, and Coasts Region (COE 2010). The COE wetlands manual is required by state law (WAC 173-22-035, as revised) for all local jurisdictions. As outlined in the 1987 wetland delineation manual, wetlands are distinguished by three diagnostic characteristics: hydrophytic vegetation (wetland plants), hydric soil (wetland soil), and wetland hydrology. Definitions for these terms are provided below.

Hydrophytic vegetation is defined as "macrophytic plant life growing in water, soil or substrate that is at least periodically deficient in oxygen as a result of excessive water content" (Environmental Laboratory 1987). The U.S. Fish and Wildlife Service (USFWS) Wetland Indicator Status (WIS) ratings were used to make this determination (Reed 1988, 1993). The WIS ratings "reflect the range of estimated probabilities (expressed as a frequency of occurrence) of a species occurring in wetland versus non-wetland across the entire distribution of the species" (Reed 1988:8). Plants are rated, from highest to lowest probability of occurrence in wetlands, as obligate (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and upland (UPL), respectively. In general, hydrophytic vegetation is present when the majority of the dominant species are rated OBL, FACW, and FAC.

A hydric soil is defined as "a soil that is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (Federal Register 1995: 35681). The morphological characteristics of the soils in the study area were examined to determine whether any could be classified as hydric.

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According to the 1987 methodology, wetland hydrology could be present if the soils were saturated (sufficient to produce anaerobic conditions) within the majority of the rooting zone (usually the upper 12 inches) for at least 5% of the growing season, which in this area is usually at least 2 weeks (COE 1991a). It should be noted, however, that areas having saturation to the surface between 5% and 12% of the growing season may or may not be wetland (COE 1991b). Depending on soil type and drainage characteristics, saturation to the surface would occur if water tables were shallower than about 12 inches below the soil surface during this time period.

Positive indicators of wetland hydrology include direct observation of inundation or soil saturation, as well as indirect evidence such as driftlines, watermarks, surface encrustations, and drainage patterns (Environmental Laboratory 1987). Hydrology was further investigated by noting drainage patterns and surface water connections between wetlands and streams within and adjacent to the project area.

2.2 Background Research

2.2.1 Wetlands

Prior to conducting our field investigations, we collected and analyzed background information available for the site from the U.S. Fish and Wildlife Service (USFWS 2012b) National Wetland Inventory (NWI) and the U.S.D.A. Natural Resources Conservation Service (2012b) Web Soil Survey. We reviewed aerial photographs (King County iMap 2012) to assist in the definition of existing plant communities, drainage patterns, and land use.

2.2.2 Wildlife

In preparation for our wildlife reconnaissance site visit, we reviewed information from the PHS database (WDFW 2012) for documented information on the potential occurrence of federal- or state-listed endangered, threatened, sensitive, candidate, other priority, or monitor wildlife species (hereafter "species of concern"), or priority habitats on the project site and vicinity. State priority species are defined as those fish and wildlife species "requiring protective measures and/or management actions to ensure their survival", and State priority habitats are defined as habitat types "with unique or significant value to many species" (WDFW 2008). We also reviewed database information maintained by the Washington Natural Heritage Program (2011) for occurrence of endangered, threatened, and sensitive plants in the vicinity of the project site.

Reference lists maintained by the U.S. Fish and Wildlife Service (USFWS 2012a) and WDFW (2008) were consulted for information on the status of wildlife species of concern that could use the site during at least some part of the year. Species accounts and management recommendations provided by WDFW (e.g., Rodrick and Milner 1991, Larsen 1997, Azerrad 2004, Larsen et al. 2004) were consulted to determine habitat

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associations of such species and to evaluate the likelihood of their occurrence on the project site. During the field investigation, we searched for the presence of these species, or signs thereof, which could be found on the property.

2.3 Field Sampling Procedures

We visited the site on April 5, 2011 to search for wetlands or streams and describe vegetation communities and wildlife habitat conditions.

2.3.1 Wetlands

During our field investigation, we inventoried, classified, and described representative areas of plant communities, soil profiles, and hydrologic conditions in both uplands and wetlands. We searched specifically for areas with positive indicators of hydrophytic vegetation, hydric soil, and wetland hydrology.

Vegetation, soils, and hydrology were examined in representative portions of the study area according to the procedures described in the Regional Supplement (COE 2010). Plant communities were inventoried, classified, and described during our field investigation. We estimated the percent coverage of each species. Plant identifications were made according to standard taxonomic procedures described in Hitchcock and Cronquist (1976), with nomenclature as updated by USDA NRCS (2012a). Wetland classification follows the USFWS wetland classification system (Cowardin et al. 1992).

We excavated pits to at least 18 inches below the soil surface, where possible, in order to describe the soil and hydrologic conditions throughout the study area. We sampled soil at locations that corresponded with vegetation sampling areas and potential wetland areas. Soil colors were determined using the Munsell Soil Color Chart (Munsell Color 2000). We used the indicators described in the Regional Supplement (COE 2010) to determine the presence of hydric soils and wetland hydrology.

Our evaluation of potential occurrence of wetlands boundaries was based on a determination of whether hydric soil, hydrophytic vegetation, and indicators of wetland hydrology are present on the site. Topographic changes within the context of the landscape were used to aid in our review of the previously delineated the wetland boundaries.

2.3.2 Wildlife

During this field investigation, we documented wildlife presence, sign, and habitat while inventorying and describing plant communities. We recorded information regarding reproduction, habitat use, and activities of all wildlife species observed. In addition, we noted special habitat features such as large and/or hollow trees, snags [standing dead or partly dead trees at least 4 inches diameter at breast height (dbh) and 6 feet tall], and large

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down logs. Historic and present land-use of the site and immediate vicinity were noted from direct observations in the field and analysis of aerial photographs.

During our field surveys, we also searched specifically for the presence, sign, or habitats of any wildlife species of concern that may occur on the project site or vicinity. In particular, we searched for the presence of large stick-type nests, hollow trees, tree cavities, and pileated woodpecker foraging sign. Large stick nests are built and used by several species of concern, including bald eagles and great blue herons. Tree cavities are created and used by woodpeckers, including species of concern such as the pileated woodpecker, and can provide habitat for a host of bird and mammal species, including species of concern such as purple martins, various cavity-nesting duck species, and various bats. Hollow trees are used as daytime roost for priority species including various bat species, as well as Vaux's swifts.

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3.0 EXISTING CONDITIONS

3.1 RESULTS OF BACKGROUND INVESTIGATION

3.1.1 Wetlands

The USFWS NWI (2012b, Figure 2) shows no wetlands within the project site. The map does depict a wetland (palustrine, unconsolidated bottom, permanently flooded) to the south of the property. Other than the Bear Creek to the east, no other wetlands are depicted within at least 1000 feet of the site.

Soils on the project site are mapped as Everett gravelly sandy loam, 5% to 15% slopes (USDA NRCS 2012b). Everett soils are well-drained (non-hydric) soils formed in glacial till.

3.1.2 Wildlife

The WDFW (2012) PHS database map shows no occurrences of species of concern, including endangered, threatened, sensitive, or other priority species or habitats on or adjacent to the project site. The Washington Natural Heritage Program (2011) database contains no records of Natural Heritage Features (e.g., listed plant species) in the section in which the project site occurs.

3.2 RESULTS OF FIELD INVESTIGATIONS

3.2.1 General Property and Site Description

The Slocum property consists of gently sloping terrain ranging elevation from approximately 150 feet above mean sea level along the western boundary of the property to approximately 130 feet along the eastern property boundary (Figure 4). The site consists entirely of a mixed coniferous deciduous forest, and is bordered by NE 195th Street on the north, single-family residential housing on the west and south, and 136th Avenue NE to the east.

3.2.2 Vegetation and Habitat Descriptions

Vegetation Community

Raedeke Associates, Inc. identified and delineated a wetland just offsite in the northeastern portion of the property (Figure 4). The wetland is located in a ditch along the eastern property boundary and occupies 966 square feet. Water in this area is conveyed to the site by a culvert under 136th Avenue NE and leaves the site by entering a culvert located just north of the property boundary. The wetland is an emergent area dominated by reed canarygrass, skunk cabbage, and salmonberry. The wetland area was saturated to the ground surface during our site investigation. Soils observed in the

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wetland are very dark gray (10YR 2/2) loams with redoximorphic features that are indicative of wetland conditions.

The upland forest was dominated by Douglas fir and western red cedar, and included a well-developed but patchy layer of tall shrubs, primarily Indian plum, hazelnut, Himalayan blackberry, with smaller amounts of salmonberry, red elderberry, and western sword-fern. The vegetation community would not be considered hydrophytic, as most of the dominant species were not rated FAC or wetter (Reed 1988, 1993; USDA NRCS 2012a).

No streams were observed on or adjacent to the site.

Soils were generally consistent with the Everett soil series mapped for the site, with no positive indicators of hydric soil. The soil profile within the topographic swale consisted of several inches of a dark (10YR 3/2) silt loam surface layer over a dark brown (10YR 4/2) sandy loam subsurface to at least 18 inches, with no redoximorphic features.

Special Habitat Features

Special habitat features include biologic elements such as snags, coarse woody debris (down logs), and edges between plant communities or successional stages, which are often important to wildlife (Brown 1985, Thomas and Verner 1986). Snags provide important foraging habitat, as well as breeding and cover sites for invertebrates and a variety of vertebrate wildlife species. On some of the trees in the western portion of the site, we observed large, oblong excavations that are indicative of pileated woodpecker foraging. However, we found no excavations indicative of nesting or roosting activities by pileated woodpeckers. The WDFW (2012b) PHS database does not depict any occurrences of priority species or habitats on the site or immediate vicinity.

3.2.3 Wildlife

Wildlife Use and Observations

A wide variety of wildlife species may be expected to inhabit lowland mixed forest communities in the Pacific Northwest, such as that found on the Slocum site. Of the more than 300 vertebrate wildlife species expected to occur in west side forests of Oregon and Washington, over 230 species occur within west side lowland mixed coniferous and deciduous forests (Johnson and O'Neil 2001). A more limited number of species are expected to occur within lowland mixed forests of western Washington, particularly King County: over 80 species, nearly 60% of which are birds, about 25% are mammals, and the rest are amphibians and reptiles (King County 1987). The number of species expected to inhabit a particular forest stand depends on its size, landscape context, and surrounding uses. Relatively small stands such as that on the Slocum property that are surrounded by urban residential uses, would be expected to support a more limited number of wildlife species. Those that do occur there may be further

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adversely affected by surrounding human activity and predation or other influences from urban-adapted species (such as crows and starlings), or other invasive species.

A variety of bird species are likely to inhabit the site and vicinity at different times of the year. Many of these are spring and summer residents that migrate out of the area for the fall and winter, as well as year-round residents. We observed no raptors (eagles, hawks, falcons and related species) during our field reconnaissance, and no raptor nests were found on any of the trees within the site. Most of the larger trees had intact tops and lacked appropriate branching structures to support large raptor nests such as bald eagles.

We observed no mammals or their sign during our field reconnaissance. Several species of small and medium-sized mammals likely use the site, though many are secretive and/or nocturnal and are therefore unlikely to be observed during a general site reconnaissance. The limited down woody debris was widely scattered the site, along with areas of dense areas of shrub and ground cover, provide potential cover and breeding habitat for small mammals. In addition, on-site trees and snags provide potential cover and breeding locations for medium-sized mammals such as raccoons and squirrels. The presence of domestic dogs and cats in the area may limit the suitability of the forest on site, as they can act as highly effective predators on native wildlife species in urban and suburban areas, particularly those that nest or inhabit the ground (Penland 1984, Maestas et al. 2003, Odell and Knight 2001, Leu et al. 2008).

We did not observe any reptiles, amphibians, or their sign during our field reconnaissance, though a small number of species of each group is likely to be present. The minimal amount of down woody debris on the site may limit the number of Puget Sound lowland terrestrial-breeding amphibians that could occupy the site. Potential cover and foraging habitat is present on the site for some reptiles, including garter snakes, and some amphibians. In addition, the relatively undeveloped nature of off-site areas to the west of the property provide for potential source populations of amphibians and reptiles, which may use portions of the project site.

Endangered, Threatened, Sensitive, or Other Priority Species

We observed no species listed as endangered, threatened, or sensitive within the project site or immediate vicinity, nor are any of these species considered to have a primary association with the project site. As noted above, sign of previous foraging by pileated woodpecker, a state candidate species, was observed in several snags on site, but none of this sign appeared to be fresh (i.e., occur since the previous fall or winter). No snags appeared to be large and tall enough to provide suitable nesting or roosting habitat for pileated woodpeckers. No other priority or other species of concern were observed or likely to occur within the project site.

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Wildlife Habitat Movement Corridors and Networks

Wildlife habitat networks or corridors can take different forms, depending on the landscape. Corridors can be in the form of hedgerows or fencerows connecting woodlots in an agricultural landscape. In a fragmented forested landscape, corridors are linear patches of forest or forested riparian zones connecting larger patches of forest. They can also be non-forested linear patches, such as utility easements, or wetland and stream systems, in a landscape that is forested. In an urbanizing environment, open space or native forestland can act as corridors connecting otherwise disjunct habitat for wildlife species.

Corridors can provide (1) habitat for certain species; (2) movement pathways; (3) extensions of foraging ranges for large, wide-ranging species; and (4) escape from predators (Harris 1984, Levenson 1981, Noss 1987, Noss and Harris 1986, Simberloff and Cox 1987). Corridors may also have disadvantages, such as (1) providing conduits for disease, fire, pests, and exotic species; (2) increasing exposure to predation; and, (3) potentially having negative genetic impacts on a population (Noss 1987, Simberloff and Cox 1987).

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4.0 REGULATORY CONSIDERATIONS

4.1 WETLANDS

Wetlands are protected by Section 404 of the Federal Clean Water Act and other state and local policies and ordinances including the City of Woodinville (2012) code. The one wetland identified would be eliminated as a result of required roadway improvements along 136th Avenue NE. The identified wetland likely will be classified as a Class 3 wetland by the City of Woodinville. The City of Woodinville states that Class 3 wetlands less than 1,000 square feet may be exempted from the provisions of WMC 21.24.320 to 21.24.340 and may be altered by filling or dredging if the Development Services Director determines that the cumulative impacts do not unduly counteract the purposes of this chapter and are mitigated pursuant to an approved mitigation plan. (Ord. 465 § 27, 2008; Ord. 375 § 3, 2004; Ord. 175 § 1, 1997. Formerly 21.24.340) (WMC 21.24.360).

4.2 WILDLIFE

4.2.1 State of Washington

State law provides protections for wildlife species listed as endangered (WAC 232-12-014), as well as threatened, sensitive, or "other protected" species (WAC 232-232-011). Recently, bald eagles have been de-listed at the State and federal level. However, eagles in Washington, currently listed as state sensitive, are still protected by the Bald Eagle Protection Act of 1984 (RCW 77.12.655), and the Bald Eagle Protection Rules (WAC 232-12-292). The Bald Eagle Protection Rules require preparation of Bald Eagle Management Plans for proposed projects that fall within a Bald Eagle Management Zone (within 800 feet of a nest, or within 250 feet of shoreline if also within 0.5 mile of a nest).

The WDFW (2012) PHS and HRTG databases show no known nest or roost sites of eagles or other listed raptor species in the vicinity of the project site. In addition, we found no nests or potentially suitable nest trees on the project site or in the vicinity. Thus, a bald eagle management plan would not be required for the site. Bald eagles are large, fish-eating birds of prey, and typically nest in large, isolated or super-dominant trees that can support their large stick nests (Watson and Rodrick 2004). Eagles tend to perch and forage in the vicinity of large bodies of water, including lakes and rivers with open-water components, and are known to nest along the shores of Lake Sammamish, but no nests are known to occur near the project site.

In addition, the WDFW (2008) has developed management recommendations for "species of concern," which include state listed and other priority species, as well as priority habitats. Occurrences or signs of priority species or habitats in the vicinity of the project site are noted above. These management recommendations are often referenced in local critical area ordinances, such as the City of Redmond in protection of "Fish and Wildlife Habitat Conservation Areas," or FWHCA.

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5.0 IMPACTS

5.1 IMPACTS TO VEGETATION

The proposed development would remove the forest habitat on the site.

5.2 IMPACTS TO WETLANDS

The proposed development would eliminate the 966 square-foot Category 3 wetland along the eastern property boundary. Class 3 wetlands less than 1,000 square feet may be exempted from the provisions of WMC 21.24.320 to 21.24.340 and may be altered by filling or dredging if the Development Services Director determines that the cumulative impacts do not unduly counteract the purposes of this chapter and are mitigated pursuant to an approved mitigation plan. (Ord. 465 § 27, 2008; Ord. 375 § 3, 2004; Ord. 175 § 1, 1997. Formerly 21.24.340).

The wetland is 966 square-feet in area and occurs in and along the roadside ditch of 136th Avenue NE. The loss of this habitat would be compensated through mitigation along Bear Creek to the northwest of the site.

5.3 IMPACTS TO WILDLIFE

Direct alteration (reduction) to the distribution, composition, and amount of native vegetation resulting from the proposed residential development would affect the distribution and composition of native wildlife on the property.

Upon completion, the proposed residential development would eliminate the forest habitat available for native wildlife on the site. This would reduce the local populations of most native species on the property. Grading and construction activities associated with the proposed development, as well as increased levels of human activity on-site, would also result in increased short- and long-term disturbance to wildlife species.

5.4 IMPACTS TO ENDANGERED, THREATENED, SENSITIVE, OR OTHER PRIORITY SPECIES OR HABITATS

Because endangered, threatened, and sensitive wildlife species are not known or likely to occur on or in the site or have a primary association with any impacted habitats, no impacts to these species are expected. The proposed development is not expected to have a substantial adverse impact on pileated woodpeckers, however, as they do not appear to be foraging there currently, and none of the snags on site appear to be suitable for nesting. In addition, the Slocum property is small compared to the large home ranges (more than a square mile) typically occupied by pileated woodpeckers (Lewis and Azerrad 2004), and thus does not likely represent a significant portion of the habitat areas

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used by pileated woodpeckers in the vicinity. No other priority species, or species of local importance, are known or likely to inhabit the site. Thus, the proposed development would not adversely affect such species.

The site would have no direct impact to streams or other habitats designated as fish and wildlife conservation areas, so the proposed development would not affect such habitats. Consequently, no habitats or habitat features known or suspected to be used by other priority species or species of local importance would be affected by the proposed site plan.

6.0 MITIGATION

Mitigation has been defined by the State Environmental Policy Act (SEPA) (WAC 197-11-768; cf. Cooper 1987), and more recently in a Memorandum of Agreement between the Environmental Protection Agency and the U.S. Army Corps of Engineers (Anonymous 1989). In order of desirability, mitigation may include:

1. ***Avoidance*** - avoiding impacts by not taking action or parts of an action;

2. ***Minimization*** - minimizing impacts by limiting the degree or magnitude of the action and its implementation;

3. ***Compensation*** - which may involve:

    a) repairing, rehabilitating, or restoring the affected environment;

    b) replacing or creating substitute resources or environments;

    c) mitigation banking.

Conversion of the Slocum property to a residential development would incorporate one or more mitigating measures that would avoid, reduce, or compensate for impacts to on-site habitat.

- The proposed development would route stormwater runoff to a detention pond to provide water quality treatment and discharge it at controlled rates to existing conveyance facilities to protect downstream resources;
- Temporary erosion and sediment control (TESC) measures would be installed during construction and would utilize appropriate best management practices (BMPs) designed to prevent sediment from on-site open space tracts and off-site areas;

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- The loss of 966 square feet of wetland would be compensated for by restoring and enhancing 1500 square feet of degraded wetland along the north side of NE 195th Street east of the Slocum property (Figure 5) and (Sheets 1 through 3 attached).

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7.0 LIMITATIONS

We have prepared this report for the exclusive use of Quadrant Homes and their consultants. No other person or agency may rely upon the information, analysis, or conclusions contained herein without permission from Quadrant Homes.

The determination of ecological system classifications, functions, values, and boundaries is an inexact science, and different individuals and agencies may reach different conclusions. With regard to wetlands, the final determination of their boundaries for regulatory purposes is the responsibility of the various agencies that regulate development activities in wetlands. We cannot guarantee the outcome of such determinations. Therefore, the conclusions of this report should be reviewed by the appropriate regulatory agencies.

We warrant that the work performed conforms to standards generally accepted in our field, and prepared substantially in accordance with then-current technical guidelines and criteria. The conclusions of this report represent the results of our analysis of the information provided by the project proponent and their consultants, together with information gathered in the course of the study. No other warranty, expressed or implied, is made.

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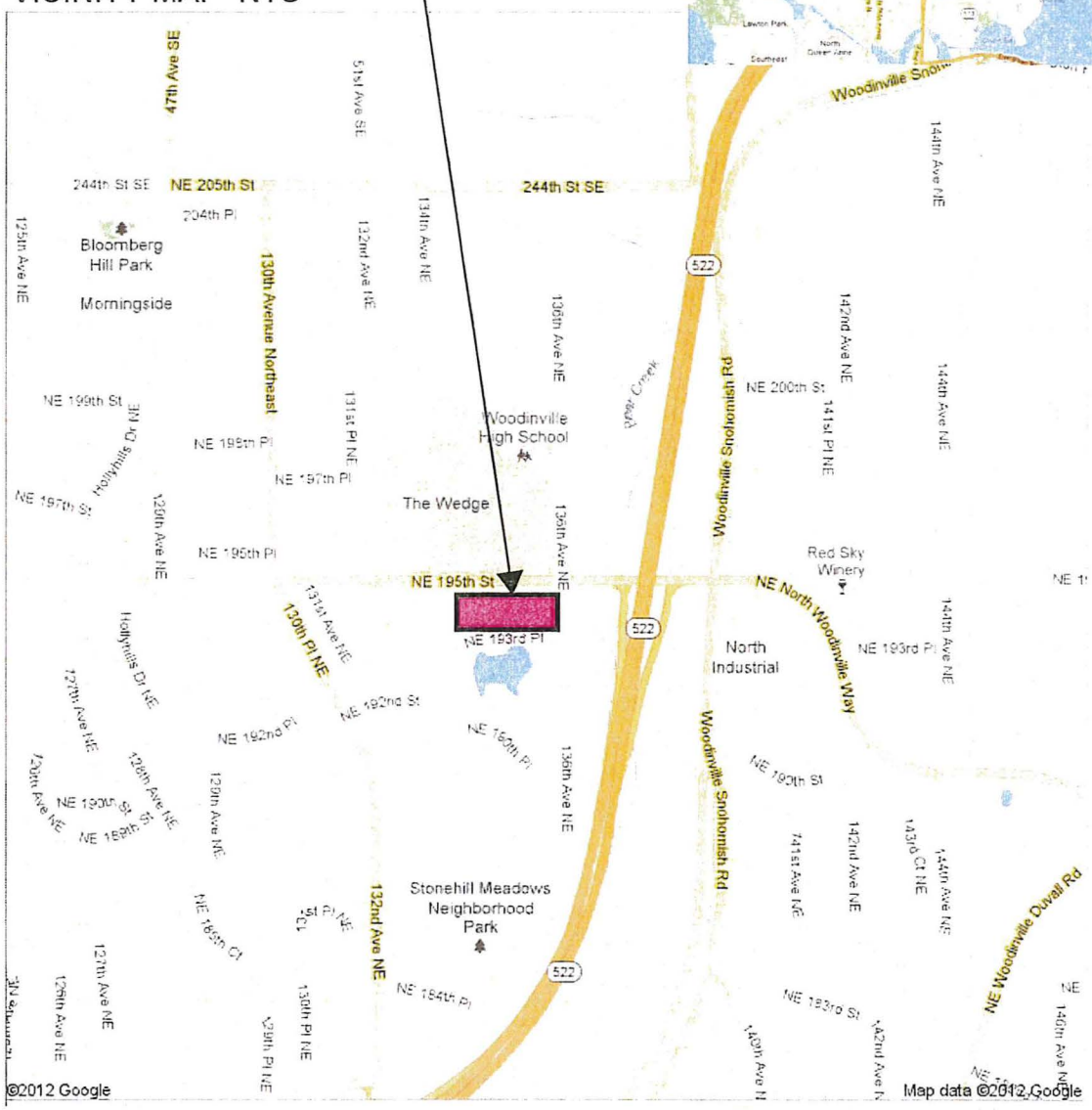
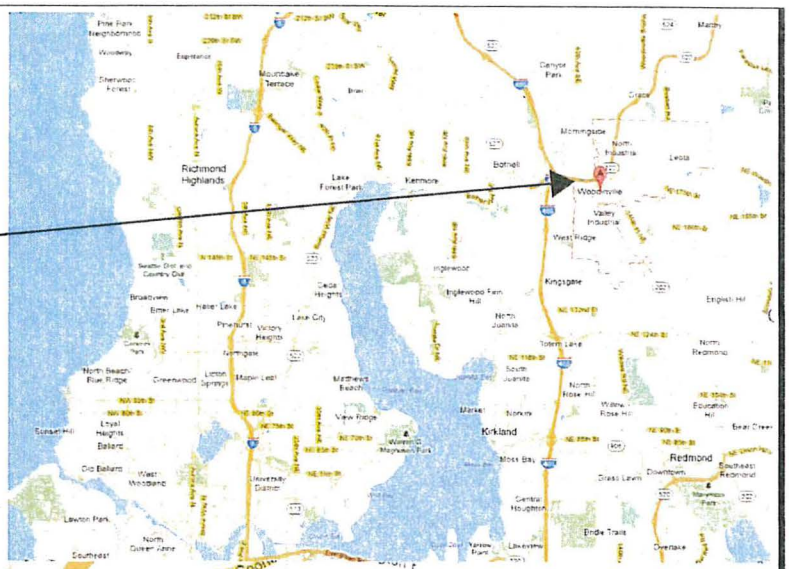
PROJECT SITE

VICINITY MAP NTS





REGIONAL MAP
NTS

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T:\2011\2011-016-Slocum\8.5 x11 Figs.dwg

Source for Regional & Vicinity map: Google Earth (Version 5.1.3533.1731) [Software]. Mountain View, CA: Google Inc. (2009). Available from http://earth.google.com. (Accessed 2012-11-1).

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FIGURE 1
SLOCUM PROPERTY
REGIONAL & VICINITY MAP
WOODINVILLE, WA

Raedeke Associates, Inc.
9310 Stone Avenue North
Seattle, WA 98103

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PROJECT SITE

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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 [2012/11/2].

SOILS KEY:

EvC: Everett gravelly sandy loam, 5 to 15% slopes

W: Water

N

0 100 200 400

SCALE 1"=200'

FIGURE 2
SLOCUM PROPERTY
SOILS MAP
WOODINVILLE, WA

Raedeke Associates, Inc.
9510 Stone Avenue North
Seattle, WA 98103

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National Wetlands Inventory

T:\2011\2011-016-Slocum\8.5 x11 Figs.dwg

Source: National Wetlands Inventory, US Fish and Wildlife Service. Wetlands Mapper. Available online at http://www.fws.gov/wetlands/Data/Mapper.html Accessed [2011/10/18].

NWI WETLAND KEY:

PUBH: Palustrine, Unconsolidated bottom, Permanently Flooded

Freshwater Pond

N

0 500 1000 2000
SCALE 1"=1000'

FIGURE 3
SLOCUM PROPERTY
NWI MAP
WOODINVILLE, WA

Raedeke Associates, Inc.
9510 Stone Avenue North
Seattle, WA 98103

RAI # 2011-016