



August 27, 2018

City of Vancouver Water Resource Protection
Attn: Nikki Guillot
PO Box 1995
Vancouver, WA 98668
(360) 487-7187
Nikki.guillot@cityofvancouver.us

Re: 63rd Street Restoration and Planting Plan | Vancouver, WA

Dear Ms. Guillot,

Ecological Land Services, Inc. (ELS) has prepared this restoration and planting plan on behalf of Legacy 6 Construction (Mark Wubben), addressing inadvertent impacts to a wetland and its buffer in response to stop work order *No.S18-000006* for Clark County Parcel No. 105190000, at 8122 NE 63rd Street, in Vancouver, Washington.

Introduction and Background

The subject parcel is approximately 3.35-acres in size and is located within Section 8, Township 2 North, and Range 2 East of the Willamette Meridian. The restoration plan was requested by the City of Vancouver following inadvertent fill placement and grading, resulting in the loss of pasture-dominated vegetation and the natural grade within the impact area. On June 18, 2018 the property owner received a stop work order (*No. S18-000006*) from the City of Vancouver for violations of the Vancouver Municipal Code (VMC) *Sections 20.740.090, Unauthorized Critical Areas Alterations, 14.25.204, Preservation of Natural Drainage Areas, 14.25.208, Wetlands Protection, and 17.12.010, Adopted International Building Code*. ELS biologists visited the site on July 30, 2018 to assess site conditions and determine the extent of impacts to the existing wetland.

Methodology and Wetland Impacts

One onsite wetland, Wetland A, was delineated by ELS using the Routine Determination Method according to the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), *the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (2010). Soil, hydrology, and vegetation data was gathered from eight test plots during the site visit. The wetland boundary was primarily determined by a transition from hydric to non-hydric soils, changes in topography, and shifts in vegetation communities, as observed in undisturbed portions of the wetland both east and west of the area of impact.

The study area consists of a single family residence with several outbuildings in the southern portion of the parcel, and a grazed horse pasture in the northern portion, where the majority of the fill material was placed. The onsite wetland is located within the northern portion of the parcel and was categorized through a preliminary rating using Washington State Department of Ecology's *Wetland Rating System for Western Washington: 2014 Update* as a Category III, depressional, emergent, forested wetland. The VMC *Section 20.740.140: Wetlands* defines buffers for Category III wetlands with a low habitat score adjacent to high intensity land use as 80 feet (Figure 2). During the site visit, ELS biologists noted that fill had been placed in the onsite wetland and buffer, save a small linear strip along the western property boundary, causing approximately 0.92 acres of direct wetland impacts, and 0.45 acres of buffer impacts. The impact varies from a fill depth of just one or two inches, up to 1.5 feet in a small area. The average depth of fill over the entire area is about 0.5 feet.

Restoration Plan

Restoration will be implemented to restore the impacted portion of the onsite wetland to its pre-existing topography, hydrology, and vegetation where grading and fill placement occurred. Proposed restoration will occur through excavation of approximately 250 cubic yards of fill material within the wetland, down to the original soil surface, and removing the material to the uplands, with care taken to create a grade of no greater than 4:1 where it will be deposited. The uplands prior to the fill placement consisted of pasture grasses. The post-placement spoils within the uplands will be seeded to grass and will continue to be used for horse pasture. No net change to the wetland buffer is anticipated as a result of this soil placement, provided the area is seeded and no final grades exceed a 4:1 slope.

Prior to and during the removal, best management practices will be implemented to prevent erosion and further damage to the wetland, including the installation of silt fencing. Fill material removed from the wetland will be evenly distributed within the southern upland portion of the parcel including portions of the wetland buffer. All disturbed areas will then be planted with respective native wetland and upland seed mixes to restore their pre-existing herbaceous vegetation communities. The use of native seed mix in the wetland and a pasture grass seed mix in the uplands will fully reestablish the impacted wetland and buffer functions by providing improved soil stabilization, increased water filtration, food source for horses, and cover and wildlife habitat. Tables 1-2 depict the seed mix planting specifications.

Planting Plan

Site Specifications

1. Stake or flag wetland boundaries.
2. Install silt fencing and erosion protection measures
3. Excavate fill material from wetland and place in uplands.
4. Install native seed mix according to plant specifications.
5. Remove silt fencing once disturbed area has been stabilized.

Planting Specifications

The planting plan proposes to install an appropriate native seed mix, purchased from a local nursery, within the disturbed wetland and a pasture grass mix in the upland areas to encourage

the development of a dense herbaceous community. Work will occur in late summer immediately following excavation to prevent soils from being exposed for an extended period. Irrigation may be necessary if site conditions are seasonally dry. The following tables summarize the species composition for the native wetland and upland seed mixes.

Table 1. Planting Specifications for native wetland seed mix

Botanical Name	Common Name	Mix Composition
<i>Beckmannia syzigachne</i>	American sloughgrass	80%
<i>Alopecurus aequalis</i>	foxtail	15%
<i>Glyceria occidentalis</i>	Western mannagrass	5%

Table 2. Planting Specifications for upland pasture seed mix

Botanical Name	Common Name	Mix Composition
<i>Dactylis glomerata</i>	Orchardgrass	30%
<i>Lolium perenne</i>	Perennial Ryegrass	20%
<i>Poa pratensis</i>	Kentucky bluegrass	20%
<i>Phleum pratense</i>	Timothy	20%
<i>Medicago sativa</i>	Alfalfa	10%

Performance Standards, As Built, and Contingency Plan

The goal of this restoration plan is to restore all wetland and buffer functions lost due to impacts from grading and fill placement. Restoration will occur by removing fill material from the wetland and dispersing it within adjacent uplands to restore the pre-existing grade of the site. All disturbed areas will then be planted with a native seed mix to achieve pre-existing wetland and buffer functions. The following performance standards have been outlined to ensure the success of the restoration area.

Performance Standards

Restoration performance standards include:

I(a) All fill material placed within the wetland will be excavated and relocated within onsite uplands to be graded.

I(b) All disturbed areas will be replanted with native seed mix chosen to replicate pre-existing vegetation communities in the respective wetland and uplands.

As Built

Photo and written documentation will be submitted to the City of Vancouver immediately upon completion of re-seeding to depict compliance with the restoration plan. The as-built report will include:

- Project location
- Site photos before and after excavation and seeding
- Short description of work completed with performance standards addressed

Contingency Plan

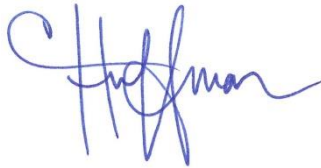
Corrective actions will be undertaken if the land owner observes that the seed mix is not providing vegetative cover following one full growing season following installation. If this is the case, the landowner will contact ELS to prepare a contingency plan following approval by the City.

Corrective actions include, but are not limited to, the following:

- Re-seed the impact area
- Implement a fertilizing and/or watering schedule.

If you have additional questions, please feel free to contact myself at coli@eco-land.com, or call (360) 578-1371.

Sincerely,



Coli Huffman
Biologist

Attachments:

Figure 1: Vicinity Map

Figure 2: Site Map

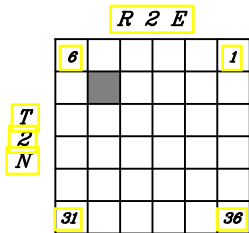
Figure 3: Planting Detail

WASHINGTON



Latitude: 45.6701°
Longitude: -122.5897°

LOCATION MAP



NOTE:
USGS topographic quadrangle map reproduced using
MAPTECH Inc., Terrain Navigator Pro software.

PROJECT VICINITY MAP

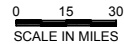
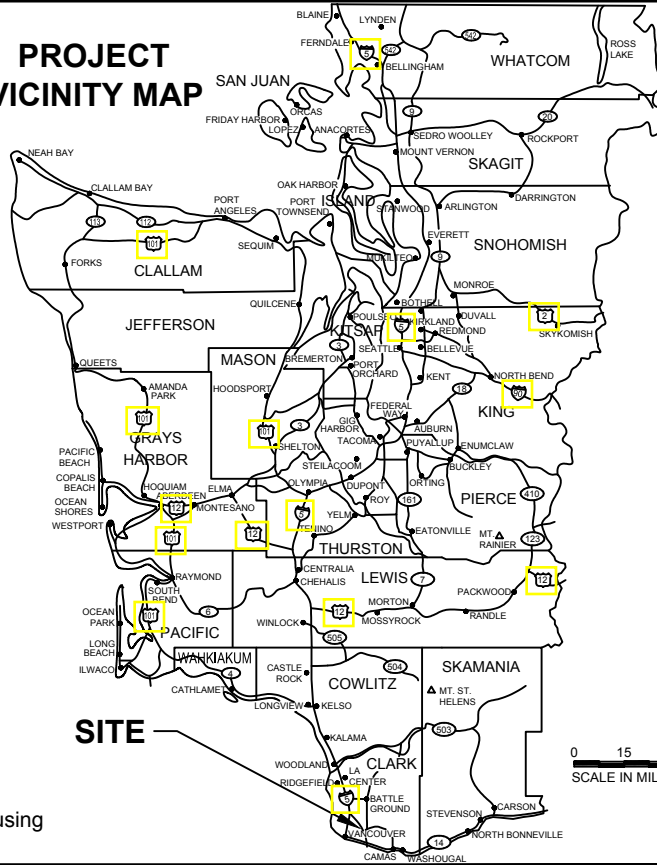
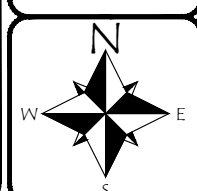
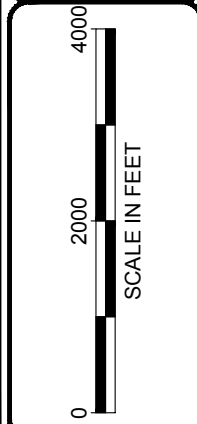


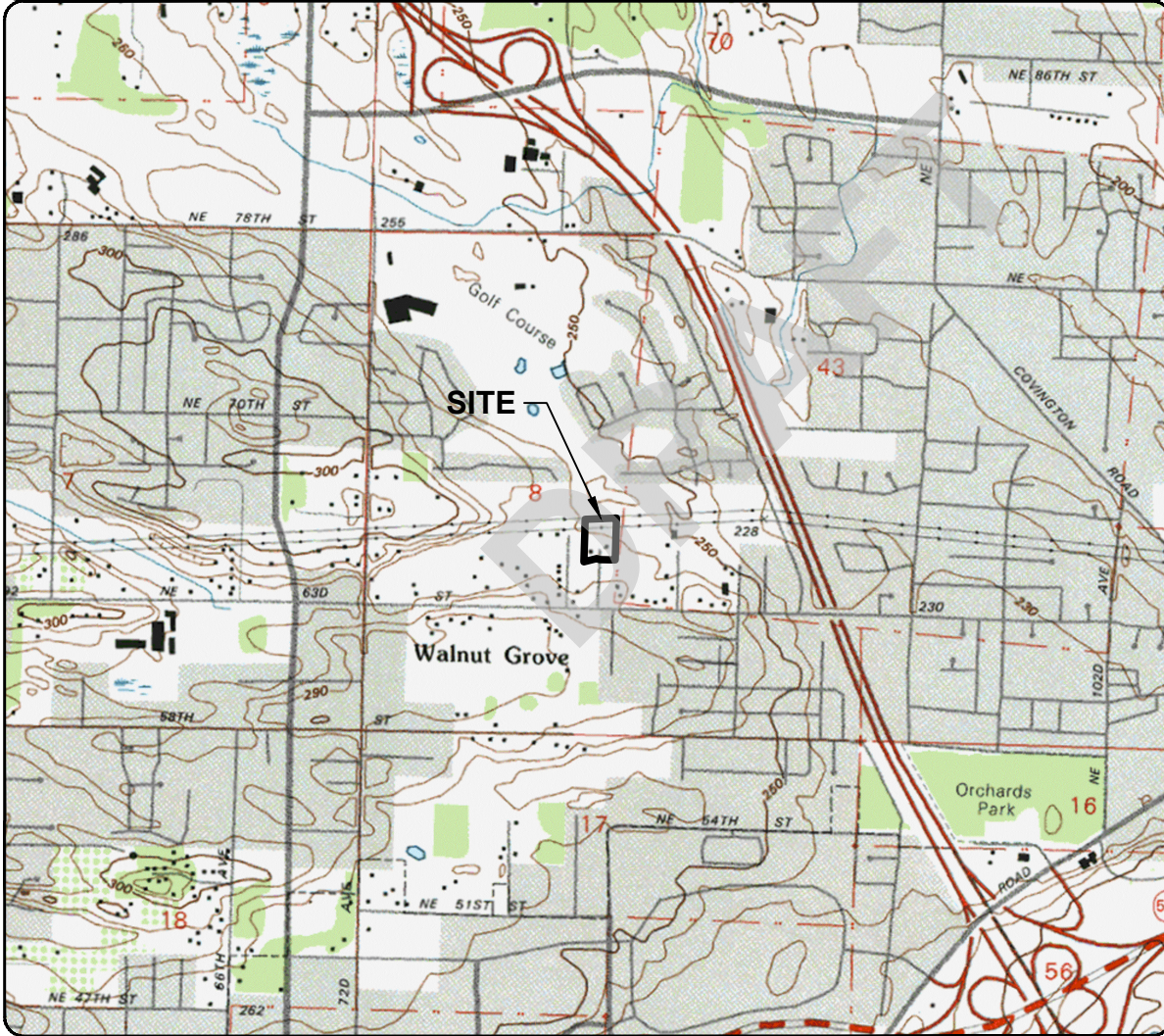
Figure 1
VICINITY MAP
63rd Street Property
Legacy 6, Inc.
City of Vancouver, Clark County, Washington
Section 8, Township 2N, Range 2E, W.M.

DATE: 8/21/18
DWN: CDP
REQ. BY: CH
PRJ. MGR: FN
CHK: MLM
PROJECT NO:
2703.02

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371
Fax: (360) 414-9305
www.eco-land.com



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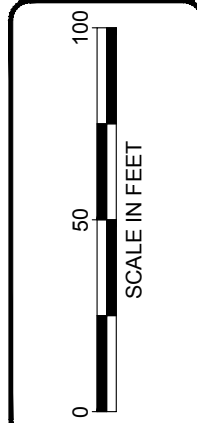
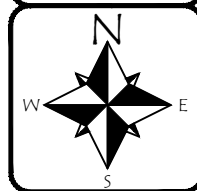


LEGEND:

- Site Boundary
- Wetland Boundary
- Wetland Buffer
- Approx. Fill Boundary
- Direct Wetland Impact (0.92 acres)
- Buffer Impact (0.45 acres)
- TP-1 ● Test Plot Location

NOTE(S):

1. Aerial from Google Earth™.
2. Wetland categorization and buffer are preliminary.



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Figure 2
SITE MAP
63rd Street Property
Legacy 6, Inc.
City of Vancouver, Clark County, Washington
Section 8, Township 2N, Range 2E, W.M.

Table 1. Planting Specifications for native wetland seed mix

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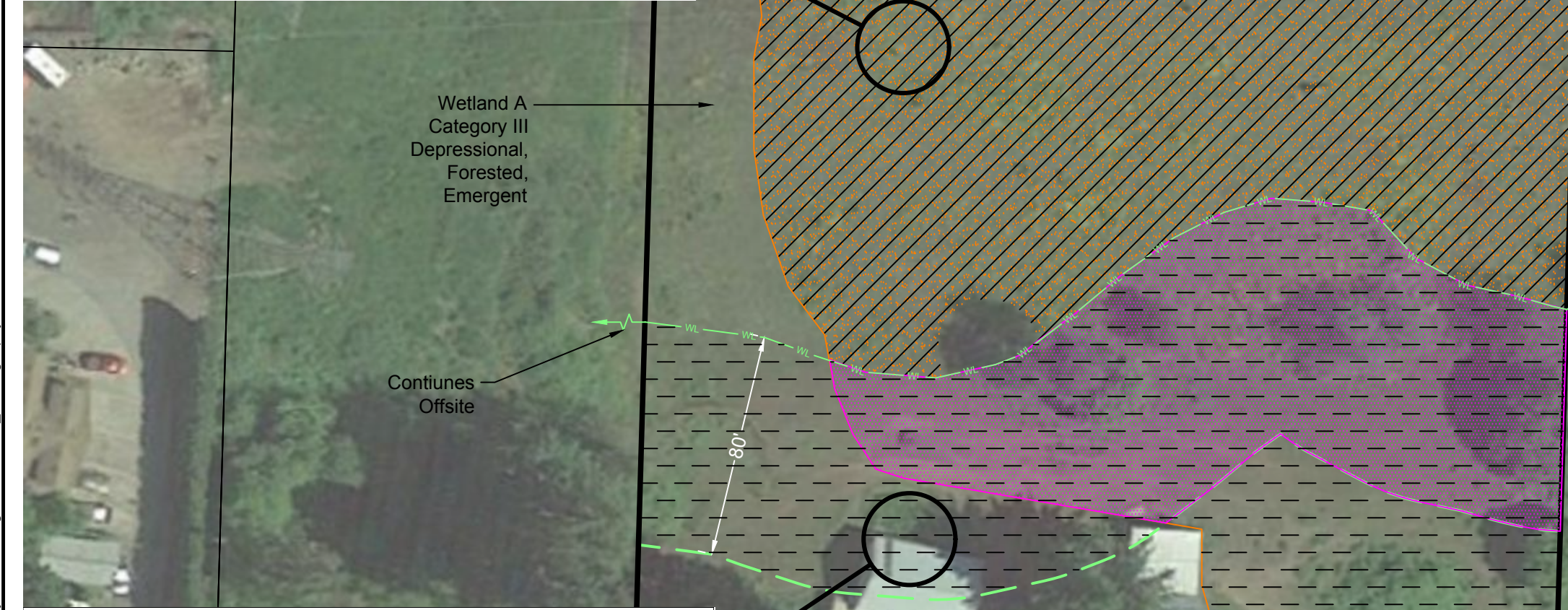


Table 2. Planting Specifications for upland pasture seed mix

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<i>Medicago sativa</i>	Alfalfa	10%

LEGEND:

- Site Boundary
- Wetland Boundary
- Wetland Buffer
- Approx. Fill Boundary
- Wetland Restoration Area
- Upland Restoration Area

NOTE(S):

1. Aerial from Google Earth™.
2. Wetland categorization and buffer are preliminary.

Figure 3
 PLANTING DETAIL
 63rd Street Property
 Legacy 6, Inc.
 City of Vancouver, Clark County, Washington
 Section 8, Township 2N, Range 2E, W.M.

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 DWN: CDP
 REQ. BY: CH
 PRJ. MGR: FN
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