



**HAYWARD USKOSKI**  
& ASSOCIATES

MEMORANDUM

To: City of LaCenter

From: Valerie Uskoski, PE

Date: December 13, 2021

RE: Stephens Hillside Farm – Memo addressing stormwater for reconfigured layout



Hayward Uskoski and Associates, Inc. (HUA) has reviewed the stormwater report for the approved Stephens Hillside Farm Subdivision (Subdivision) to ensure that the revised layout can comply with stormwater regulations. While the revised layout for the Subdivision is different, it results in an increase of 0.07% in impervious surfaces. A summary of the changes to impervious surfaces have been provided in the exhibit overleaf.

**Detention:**

The initial Subdivision proposed 13.6 acres of new impervious surfaces. The proposed revision will create an estimated 13.7 acres of new impervious area. HUA will provide a new stormwater technical information report showing the site complies with the detention and metered release requirements of the 1992 Puget Sound Manual during final engineering.

**Treatment:**

The Subdivision is approved to use bioswales for treatment. HUA will either maintain the use of bioswales for treatment or upgrade the treatment of stormwater to a Contech filtration system such as cartridges or a Bioscape Filterra unit as approved by the Washington State Department of Ecology. HUA will provide treatment calculations for during final engineering to account for changes in the treatment facilities.

**Metered Release:**

The detention facility will retain the meter released outfall to the riparian area. The outfall structure will be modified as needed to comply with release rates. HUA will provide verification of the release rates during final engineering of the site.

Approved Layout

See "Table 2"

Developed Area Quantities (acres)							
Drainage Basin:	Total Area:	Streets & Sidewalks:	Driveways:	Roofs:	Contrib Impervious Area (Roofs Inc.):	Contrib Impervious Area (No Roofs):	Contrib Impervious Area:
Basin West	17.2	2.75	0.69	3.3	6.74	3.44	10.46
Basin East	13.63	2.85	0.53	2.53	5.91	3.38	7.72
Basin Off	4.45	0	0.06	0.12	0.18	0.06	4.27
Basin East	7.52	0	0.53	0.24	0.77	0.53	6.75
Totals:	42.8	5.6	1.81	6.19	13.6	7.41	29.2

Reconfigured Layout

Developed Area Quantities (acres)							
Drainage Basin:	Total Area:	Streets & Sidewalks:	Driveways:	Roofs:	Contrib Impervious Area (Roofs Inc.):	Contrib Impervious Area (No Roofs):	Contrib Impervious Area:
Basin West	17.2	2.9	0.86	3.17	6.93	3.76	10.27
Basin East	13.66	2.87	0.3	2.65	5.82	3.17	7.84
Basin Off	4.45	0	0.06	0.12	0.18	0.06	4.27
Basin East	7.52	0	0.53	0.24	0.77	0.53	6.75
Totals:	42.83	5.77	1.75	6.18	13.7	7.52	29.13

Percent Error

Total Area:	Streets & Sidewalks:	Driveways:	Roofs:	Contrib Impervious Area (Roofs Inc.):	Contrib Impervious Area (No Roofs):	Contrib Impervious Area:
0.07%	2.95%	3.31%	0.16%	0.73%	1.46%	0.24%