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Attachment A ***DRAFT* SCOPE OF WORK**

Suzuki Property Ecological Assessment
Prepared By: ESA
Prepared For: City of Bainbridge Island
~~October 24~~ November 1, 2016

On behalf of the City of Bainbridge Island (City), Environmental Science Associates (ESA) has prepared a scope of work (SOW) and cost estimate to conduct an ecological assessment of the Suzuki Property, a 13.83 acre City-owned property. The work will be completed within four (4) tasks as described in this SOW.

Task 1. Kickoff and Data Collection

A kickoff meeting will be held with City staff to introduce the ESA team, review the basic goals of the project, and for the City to provide the context for the project and provide relevant data sources. The kickoff meeting will be scheduled to coincide with the field review of the site.

ESA will conduct a review of existing ecological data relevant to the Suzuki Property, including Washington Department of Fish and Wildlife (WDFW) habitat and species data, United States Geological Survey (USGS) groundwater data, and wildlife observation data from local experts. ESA will coordinate with City staff and the Environmental Technical Advisory Committee (ETAC) members to identify the relevant local data sources for the property.

A one day field investigation of the site will be conducted by the Project Manager and two biologists. The field investigation will focus on collecting data needed to characterize the significant ecological features on the property, including the identified stream, pond, and wildlife corridor. The locations of significant ecological features will be surveyed with GPS. Additionally, wildlife observations will be collected during the field investigation.

Prior to development of the Ecological Assessment Report (Task ~~4~~3), ESA will prepare a list of relevant data sources to be included in the habitat assessment.

Deliverable:

- Kickoff meeting summary notes
- Draft list of data sources, to be reviewed by City staff and/or ETAC.

Assumptions:

- The kickoff meeting and field data collection visit will be attended by the Project Manager and two biologists over one day.

Task 2. Forest Survey

ESA's arborist subconsultant (Tree Solutions, Inc.) will conduct a field survey and prepare a technical report that characterizes the forest community types found on the Suzuki Property. The report will discuss the approximate age, extent, health, and tree and understory species composition of the forest communities within the parcel, with an emphasis on the identified grove of "old trees" located in the southeastern portion of the property. The boundaries of the different forest community types on the property and individual old (e.g. 100+ years old) trees will be surveyed. The results of the forest survey, as well as applicable management recommendations for protecting the grove of old trees, will be documented in a forest survey report. This report will be summarized and included as an appendix to the ecological assessment report (Task ~~4~~3).

Deliverables:

- Draft Forest Survey Report (electronic format).
- Revised Forest Survey Report, revised per one round of review and consolidated comments by City staff (electronic format).
- Final Forest Survey Reported, revised per one round of review and consolidated comments by ETAC and/or the City Council (electronic format and up to 3 hard copies if required).

Assumptions:

- The tree survey will be conducted by a team of two arborists over one day.
- Up to five trees will be cored to determine the approximate age of the forest communities on the property.
- A full survey of every individual tree on the property is not included in this SOW.

Task 3. Aquifer Recharge and Soil Infiltration Investigation

ESA will conduct an investigation to classify the aquifer recharge potential of the Suzuki Property. The assessment will use existing studies (e.g. Natural Resource Conservation Service [NRCS] soil mapping, USGS surficial geology mapping, and USGS groundwater reports and data for Bainbridge Island) and soil infiltration tests. Infiltration will be tested at a minimum of 5 locations throughout the property, using the methodology described in *Soil Quality Test Kit Guide* (NRCS, August 1999).

The results of the aquifer recharge and soil infiltration investigation will be documented in a technical memorandum, to be summarized and included as an appendix to the

ecological assessment report (Task 4). The memo will contain supporting figures(s) that show the generalized aquifer recharge potential of the site classified into 3 categories (high, medium and low). The memo will also describe broad management recommendations for protecting the aquifer recharge functions of the property, and summarize the potential opportunities and limitations for the use of Low Impact Development (LID) stormwater management facilities.

Task 4. Ecological Assessment Report

ESA will prepare an ecological assessment report that describes, characterizes, and maps the ecological baseline of the property, with a focus on the habitat features specified by the City. These habitat features include a stream, pond, wildlife corridor, and a grove of “old trees.” The report will also discuss the aquifer recharge potential and other relevant hydrologic functions of the property. The relative ecological value of the habitats present on the site will be described in a qualitative manner considering contributing factors such as level of disturbance, presence of non-native species, potential for aquifer recharge, interspersions of habitat types, habitat diversity, position in the landscape, and connections to adjacent habitat parcels.

The report will include a summary of the potential ecological and aquifer recharge effects to the property ~~from the proposed development~~ if development occurs. Based upon current scientific literature and agency guidance, the report will include management recommendations for protecting and minimizing effects ~~from the proposed project~~ to ecological features and functions, as well as groundwater resources.

Prior to commencing work on the report, ESA will prepare a draft outline of its contents and organization for City review.

Deliverable:

- Draft report outline (electronic format).
- Draft Habitat Assessment Report (electronic format).
- Revised Habitat Assessment Report, revised per one round of review and consolidated comments by City staff (electronic format).
- Final Habitat Assessment Report, revised per one round of review and consolidated comments by ETAC and/or the City Council (electronic format and up to 3 hard copies if required).

Assumptions:

- This SOW is limited to two rounds of revisions of the Habitat Assessment Report

Task 5. Coordination and Meetings

ESA and Tree Solutions, Inc. will coordinate with the City and ETAC in support of this ecological assessment. This task includes one in-person meeting with City staff and/or ETAC to discuss the ecological assessment and methods. ESA will also provide supporting materials and attend one City Council meeting, if requested. This task also includes time for project management (contracting, scope-budget control, invoicing, internal meetings, and team coordination).

Deliverables:

- Monthly progress reports with schedule updates.

Assumptions:

- With the exception of the in-person meetings listed above, team meetings will be conducted by phone.

Cost Estimate

Task	Description	Hours	Cost
1	Kickoff and Data Collection	42	\$6,480
2	Forest Survey	46	\$5,780
<u>3</u>	<u>Aquifer Recharge and Soil Infiltration Investigation</u>	<u>64</u>	<u>\$9,860</u>
<u>43</u>	Ecological Assessment Report	116	\$16,240
<u>54</u>	Coordination and Meetings	62	\$8,600
Expenses			
	Trimble GPS unit (\$75 per day)		\$150 <u>225</u>
	Mileage (\$0.54/mile)		\$50 <u>75</u>
	Ferry fare		\$100 <u>130</u>
	Subconsultant markup (15%)		\$993
	Subtotal		\$1,293 <u>1,423</u>
Total Project Price			\$38,393 <u>48,383</u>