3m. American Forest Management letter report on a significant tree inventory October 28, 2013 American Forest Management

American Forest Management letter

report on a significant tree inventory, October 28<sup>th</sup>, 2013.

3m) Application and Submittal Package.

11115 NE 128th St Suite 110 Kirkland WA 98034 • (425)820-3420 • FAX (425)820-3437 www.americanforestmanagement.com

October 28th, 2013

Mr. Colin Lund Yarrow Bay Holdings 10220 NE Points Drive, Suite 310 Kirkland, WA 98033

November 8, 2013

RE: The Villages MPD Phase 2 Plat C Preliminary Plat Application

Dear Mr. Lund:

At your request, we have completed an inventory of significant trees within the Villages MPD Phase 2 Plat C Preliminary Plat (approximately 136 acres). The tree inventory area included the area to be developed, and the park area (41.14 acres). The following report summarizes the tree data collected which will be used to comply with the the City of Black Diamond's tree mitigation requirements. The field work was completed by Kelly Wilkinson and Jesse Saunders on October 25th, 2013,

The tree inventory area is comprised of 41.14 acres. All species over 6" DBH (diameter at 4.5' above ground), were inventoried on sample plots, even though some species present are not considered "significant" under city code. One of these non-significant species, red alder, exists in minor numbers on the property. In the summary table that follows, red alder is not included. Please refer to the cruise reports at the end of this report for nonsignificant tree information.

In this report I've included a copy of the clearing limits map showing the area and acreage that was surveyed, a map of the plot locations and a table showing the species, diameter and count of significant trees.

## **Stand Description**

The forest stand is comprised primarily of planted Douglas-fir, with a minor component of volunteer red alder, big leaf maple, red cedar and western hemlock. The average DBH is 14" with a tree per acre count of significant species of 193. The estimated total significant tree count is 7,969 trees. Scattered infections of laminated root rot were found throughout the stand.

The forest cover primarily consists of sword fern, vine maple, salmonberry, Oregon grape and salal. There are some invasive species present, herb Robert, Scotch broom and English holly.

# **Inventory Methodology**

The subject area was inventoried using fixed plot sampling. The inventory software used was "Superace Timber Cruising Software", which is the industry standard. Inventory plots were established at a rate of approximately one plot per one acre. A total of 42 plots were sampled in 41.14 acres of forest cover. The plot sizes were 1/50th acre. The plot radius size was chosen to sample an average of five trees per plot. A target sampling error of 7.5% at one standard deviation was desired to get an accurate estimate of trees per acre over the entire project area. See the attached cruise map for plot locations.

### **Summary Tables**

The following tables indicate the number of trees per acre by species and diameter classes. Significant trees were broken out into diameter classes per Black Diamond City code (6"-9") (10"-12") (13"-16") (>17"). Non-significant tree species are not included in the summary table.

Tree Summary (Trees per Acre)

Species	6" - 9"	10" - 12"	13" - 16"	17" +	Total
Douglas-fir	21	41	92	37	191
Western Hemlock			1		1
Total	21	41	93	37	193 / 5 🗸

#### Sampling Error

The tree per acre sampling error was computed at 6.4% at one standard deviation for the inventory. This means that 68.1 times out of 100 the actual tree per acre count will be within 6.4%. The other 32 times out of 100 the actual tree count will be above 6.4%. At 2 standard deviations, the sampling error is 10.4%. This means that 95.3 times out of 100, the actual tree count will be within 12.8%.

Please call if you have any questions or if I can be of further assistance.

Sincerely,

# Kelly Wilkinson

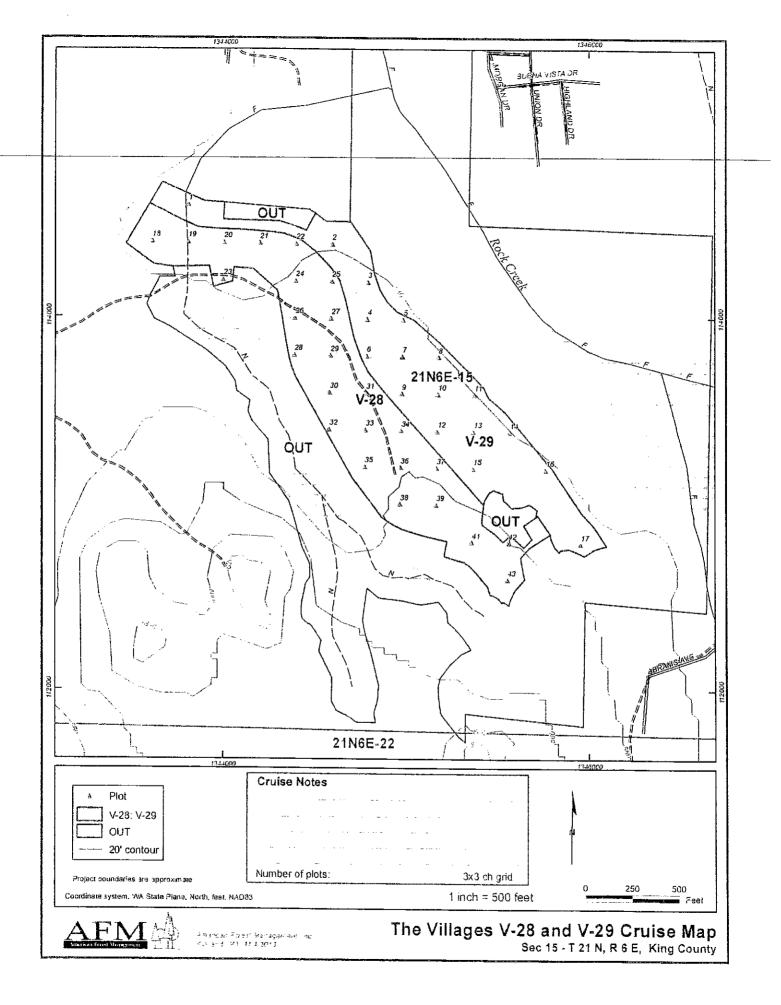
Forester | American Forest Management, Inc.

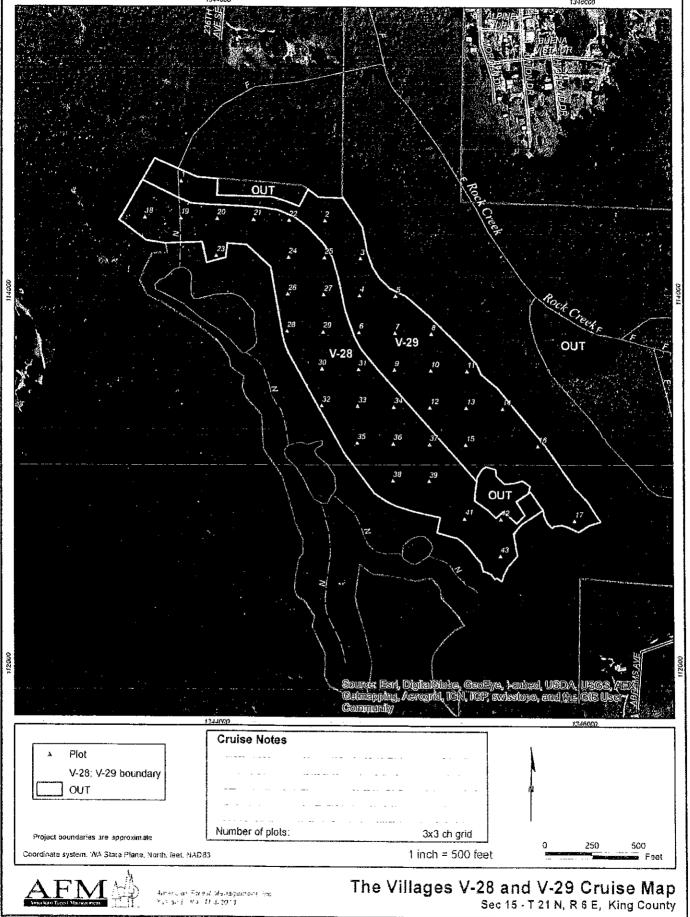
Tel: (425) 820-3420 | Email: kelly.wilkinson@amforem.biz

#### **Enclosures:**

Orthophoto Plot Vicinity Map Orthophoto Plot Location Map Topography Plot Location Map

Superace Cruising Reports
Stand Table Summary
Type Statistics





TC Yarrow	PSTNDSL Bay	.М					Stand '	Table S	ummary				Page Date:	1 11/4/2013	
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							Acres		41.	14			Grown Year:		
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DF	11	16	99	17	18.962	12.51									
DF	12	16	99	17	18.893	14.84									
DF	13	15	99	17	17.820	16.43		İ							
DF	14	23	99	17	27.370	29.26									
DF	15	23	99	17	27.405	33.63									
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DF	17	21	99	17	24.948	39.32				1					
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WH	Totals	I	99	17	1.176	1,26				1					
Totals		163	99	17	193.702	206,74							-		

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WH		Totats	i	99	17	2.000	2.14									
Totals			107	99	17	214.000	217.96				<u> </u>					

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