

2015 Configuration with RDI Leave Addition Comparison with Rennie's Suggestions



Rennie's Suggested Cut and Leave Areas (also outlined in red on aerial photo)



BCTS Planned Leave Areas



RDI Recommended Leave Areas



Compa	rison of Final Des	ign with Rennie Suggestions
Rennie's Numbers (Old Cutovers)	Rennie's Suggested cut and leave (numbered by RDI)	Comparative Results
1	8 - cut	No comparable in BCTS - no operations
2	9 - cut	same as BCTS 87597-9 new block; leave patch in AL7VP between Areas 2 and 5
	1 - cut	same as BCTS 87597-7 new block
3	2 - cut	same as BCTS 87597-6 new block
	3 - cut	same as BCTS AL7VN plus leave
4	7 - cut	no comparable in BCTS - covers leave area (reverse of suggestion). BCTS leave area screens upper road in AL7VQ
4-5 gap	5 &6 leave areas	leave areas same as BCTS leave areas in BCTS AL7VR. RDI recommended tiny additional patch at base of central leave patche to tie into Area 5
5	4 - cut	same as BCTS 87597-8 new block
5-6 gap	none defined	Rennie's suggested lower boundary of Areas 5 could be more irregular. BCTS responded with 4 leave patches in DO76F. RDI recommended 1 more (2ha) for more continuity through the block
6	none defined	BCTS and RDI leave areas provide greater tie - in between existing cutovers

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Introduction to VIA Report

FL A87597 will lay on a landform previously impacted by large, angular cutovers. An initial plan of rehabilitation of the cutovers was prepared in 2013 and 2014 by BCTS. RDI prepared a VIA based on that plan. The plan had the objective to reduce the amount of forest between the cutovers at an early enough stage so that old and new cutovers would merge to reduce the horizontal line effect, and to allow re-growth together into a single-aged large pattern of openings.

The initial plan was reviewed by Peter Rennie, Landscape Specialist, MFLNRO Southern Interior Forest Region during a meeting with BCTS on February 27, 2015. Mr. Rennie concluded in subsequent email communication between himself and Frank Kohlberger, BCTS, that the plan was too aggressive and would not achieve the objective of reducing angularity. He provided a sketch on an aerial photo to provide clarity to what he considered might be an improvement, by expanding the edges of the existing cutovers and providing substantial leave areas between which would enhance the flow of visual forces through the new development. The BCTS 2015 cutblock and retention area plan is a second generation evolution incorporating many of the Rennie suggestions while maintaining adequate operational flexibility and opportunity. RDI suggested an additional small design suggestion for two small leave patches.

As described by Frank Kohlberger in his email to Peter Rennie on March 13, 2015, the Dora plan has two objectives: "1.) viably harvest timber from the area (so as to contribute to the BCTS primary objective of providing reliable market pricing data across the timber profile); and 2.) to improve the currently unacceptable visual impact (not to meet specific aspects of the VQO, but rather to make it visually less distasteful than it currently is, and to help it move to even better visual impact quicker)". He continued in that note: "I should also note that one of our thoughts is that if we go in there, we will do what we can in one entry, then put things to bed and leave it alone to repair itself, as opposed to making multiple entries with ongoing new harvest and roads, disturbance, etc. The last point to mention is that we hope to harvest so as to reduce the ongoing impact of the balsam bark beetle that exists there.

Mr. Rennie responded on March 18 stating that his sketches were "aimed more at meeting the visual rehab objective than the viable harvest objective, but it might point to a final solution." and that he is "reluctant to suggest any more harvesting given the scale of impact that already exists on the slopes".

Rennie's sketches were interpreted by RDI and added to the base map of the final design. Both the sketches and RDI interpretation are placed onto a single page in the RDI report for ease of comparison.

The final iteration of proposed cutblocks with retention areas by BCTS, in consideration of Mr. Rennie's ideas, were provided to RDI on May 25, 2015 and were used by RDI in the preparation of visual simulations and percent alteration calculations. The final layout appears to have implemented the majority of Mr. Rennie's design considerations (Table 1). Three areas suggested for expansion in the Rennie analysis (Units 3, 7, and 8) were not incorporated in the BCTS plan and are not recommended by RDI as they would further enlarge the degree of visible alteration. These were also not considered to be effective by RDI. RDI added two small leave areas to further enhance the structure and continuity of retention through the blocks, further weakening the horizontal effect of the old cutovers.

The cutovers have substantially greened-up. Green-up in the lower cutovers were reaching 2.5m to 3m in 2014. RDI opted to leave the cutovers out of the percent alteration calculations for the proposed cutblocks given the amount of re-growth, and the rehabilitation objective. Winter photography still highlights the cutovers, adding to the perceived rate of alteration on the landform.

Findings

The comparisons between the final BCTS layout design and the Rennie suggestions are summarized in Table 1. Visibility by viewpoint is presented in Table 2. RDI prepared simulations of the proposed development using Visual Nature Studio. Simulations were prepared from each viewpoint and are presented in the VIA document. Blocks are labelled in each simulation. The back page of the document presents a simulation from VP 1730.3 which has included Rennie Units 3. 7 and 8 as clear-cut.

Percent alteration for the proposed development was calculated by RDI from 4 viewpoints, providing a range of viewing opportunities, and are summarized in Table 2. The back page shows the percent alteration effect of adding the 3 Rennie areas not incorporated already into the plan.

Old Openings (Rennie Numbers)	Rennie Suggestion Cut / Leave	Achievement of Rennie Suggestions	Comments
Area 6	make link through block DO76F	Ach i e ve d	DO76F above works to weaken Area 6. Rennie recommended linkag through block; BCTS Leave patches and RDI additional leave area provides increased linkage through block.
	4	Achieved	BCTS 87597-8 same as Rennie 4 - weakens upper line of Area 5. DO7 below and AL7VR above work to break up straight lines of Area 5.
Area 5	5	Acheived	Rennie recommended linkage through block; BCTS Leave patches at RDI additional leave area provides significant, well-designed linka through block. RDI patch added to improve flow with lines of force
	6	Achieved	Minor angularity from viewpoints. R6 covered by BCTS leave area.
Area 4	7	not Recommended by RDI	Rennie 7 would eliminate much a BCTS leave area below AL7VQ. Larger Rennie 7 opening would introduce 0.7% additional alteratio Not recommended by RDI except perhaps a small opening to reduccorner of Area 4. Leave areas in AL7VR including small additional patch provide some linkage with good design. BCTS leave area part overlaps Rennie 7.
	12	achieved	BCTS Leave covers similar area as Rennie opening 7. Rennie 12 is actually a BCTS leave area. BCTS AL7VN, 87597-6, and 87597-7 cover most of Rennie openings around Area 4.
	3	not recommended by RDI	Rennie 3 would enlarge opening around Area R3 and eliminate a B leave area (adding 0.7% to total percent alteration). Areas R1 and R were already identified as leave areas by BCTS.
Area 3	2	achieved	Replicates Rennie's suggested block 2 to weaken Area 3.
	1	achieved	Replicates Rennie's suggested block 1 to weaken Area 3 (but not seen).
	9	achieved	BCTS 87597-9 same as Rennie 9 small sliver associated with AL7VP.
Area 2	8	not recfommended by RDI	Small leave area breaks AL7VP; provides flow-through connected to stronger force line above. Perhaps make larger to be fully effective. No BCTS block to address Rennie 8; Advanced Regen. Rennie 8 woul weaken strong forest band above, and would add 2.5% to total percent alteration. Hold on to most of the limited forest above Area good shape. Total alteration already large enough. For example, froviewpoint 1730.3, it is 10% without the Rennie additions 3, 7, and 8 These additions would add another 3.9% to bring it to a total of 13. Overall percent alteration will have to be reduced to meet PR, but recessarily if rehab is the approved management decision. No greater incursions should be contemplated until the area is restored.

	Tak	Table 2 Visibility by Viewpoint							
встѕ	1730	1730.1	1730.2	1730.3	1734				
D076F									
DO76F	В	В	В	В	S (screened)				
87597-8	S	S	S	S	S				
AL7VR	В	В	В	В	В				
AL7VQ	NVS	NVS	S	S	ОК				
AL7VN	S	OK	ОК	ОК	OK				
87597-6	NVS	S	OK	OK	OK				
87597-7	NVS	NVS	NVS	NVS	NVS				
87597-9	S	NVS	NVS	S	S				
AL7VP	В	В	В	В	В				
Percent Alteration	7.2%	not calculated	not calculated	10.0%	8.9%				

Conclusions

The BCTS plan for Dora A87957 has elements of good design and has responded significantly to the Rennie recommendations. Percent alteration ranges from 7.2% to 10.0% as seen from the 4 viewpoints used in the calculations.

Of the 10 areas suggested by Rennie for additional cut or leave, all but 3 areas were incorporated by BCTS. Three areas for additional cut recommended by Rennie, units 3, 7, and 8, were not included in the final BCTS plan, nor were they recommended by RDI for inclusion in the plan as they would incur additional percent alteration. For example, the three additional cuts would create an additional 3.9% alteration from viewpoint 1730.3, as compared to 10% in the current plan.

Some angularity, namely in the northeast corner of cutover area #4 may still be adjusted with some more limited harvesting in Rennie7 if operationally appropriate.. The Rennie suggested areas are presented on the second key map at the front of the

- B = Broken up by leave areas; good shape if not noted otherwise VIA document, and simulated on the final page.
- S = Sliver only, good shape
- OK Good shape

Visual Impact Assessment Summary Table

	Dist	trict: Clear	water	Licen	ısee: l	BC Tir	mber Sa	ales						
Licence Number	A87597	CP# & BLK #, or RP#:	D076F AL7VN AL7VP AL7VQ AL7VR A87597-6 A87597-7 A87597-9 (last 4 as numbered by RDI)	Map Reference #:		d055	Proposi of Harve	•	2015		oposed stem		C with eave	
	oposed Alte		N, Oil lease, et	c.)			Cutbloo	ks, roads						
VISUAL LA	ANDSCAPE	INVENTORY	LABEL (old)	VLU#:		VSR:		VAC:		EVC:		EVQO:		
VISUAL LA	ANDSCAPE	INVENTORY	LABEL	VSU#:	1143	VSC:	2	VAC:	М	EVC:	ММ	EVQO:	PR	
DOES EVO	EXCEED T	HE ESTABLIS	SHED VQO?	L		J				Ye	s* y		No	

*EVC needs updating from last inventory - achieving PR/M with regrowth

VIEWPOINTS & VIEWING CONDITIONS

Viewpoint	Longitude	Latitude
1730	119.09791	52.57589
1730.1	119.09610	52.58619
1730.2	119.10125	52.59421
1730.4	119.11180	52.60344
1730.3	119.10781	52.60030
1734	119.12118	52.60860

ASSESSING BASIC VQO DEFINITION

Does the proposed alteration, in combination with any existing non-Veg alterations, achieve the b for the established VQO from each of the identified viewpoints? No (see FPPR definitions below).

"Partial Retention" means an alteration of a forest landscape resulting from the presence of cutbloc that, when assessed from a viewpoint that is representative of significant public viewing opportunit (a) is easy to see, (b) is small to moderate in scale, and (c) has a design that appears natural and geometric (FPPR S 1.1).

"Modification" means an alteration of a forest landscape resulting from the presence of cutblocks o when assessed from a viewpoint that is representative of significant public viewing opportunities, the very easy to see and is either (a) large in scale with a design that is natural in its appearance, or (the moderate in scale but with a design that has some angular characteristics.

The overall development, located upon the small landform within VSU 1143 which has an establis Retention, will be closest to achieving the Modification. It will be very easy to see, will be large in have a design that will appear natural and not strongly angular except where it meets the existing development will have significant, well-placed retention areas to break up the new pattern of cutb provide considerable reduction in the horizontal effect of the existing cutovers. RDI recommends small patches, 2.1 ha and 0.5 ha in extent, to further strengthen the force lines travelling through and further weakening the horizontal effect of the existing development. This proposal will create necessary to achieve links through the landform, rehabilitating the strongly horizontal lines of the The larger south portion of the VSU is distinct from the north portion – the assessment landform, considered in this assessment.

ASSESSING	MILIDIA	DEGICN
MOODOONING		

If appli	cable, w	hich basic	VQO definition v	vould th	ne pro	posed alterat	tion in c	combin	ation with any	YES X 🗖 and
existin	g Non-V	EG alteration	ons meet?							NO □
N/A □	or	P 🗆	R □	PR		$M X \square$	MM		EM □	
			(all are transitory I	nighway	views, f	ocal travelling so	outh)			
Do the	propose	ed alteration	ns respond to the	e lines	of forc	ce analysis?				YES X□ and NO □
I£ NI	.LO									NO 🗖

If No why?

Describe the design principles and practices used to blend the proposed alteration(s) with the landscape (e.g. edge treatment & feathering, irregular boundaries, leave trees/patches, etc.) Irregular boundaries following with lines of force; groupings of openings with older cutovers will form a broad array of pattern. Overall result, focal down the highway, will tend to mitigate long term visual impacts following initial exposure.

Are there existing human made alterations visible in the unit showing no or poor design?

NO
YES X
Though recovering, past harvesting has left a residual horizontal pattern traversing the landform (VSU 1143A). The patterns are most noticeable with winter snow cover.

ASSESSING SCALE OF ALTERATION - Original Plan

(Use photographs or computer simulation output for calculations) (See Appendix 4 for example of calculation)

1730 – 7.2% 1730.3 – 10% 1734 – 8.9%

Percent alteration was calculated for the closest, mid-way and furthest key viewpoints along the highway.

Viewpoint 1730, closest to the landform (3km to centre) <u>meets</u> the VQO (when rounded to the whole number); Viewpoint 1734, furthest from the landform (6.6km to centre) exceeds the VQO by 1.4%, and the midpoint view exceeds the VQO by 3%. As the objective is visual rehabilitation, with the VQO exceeded from some viewpoints the proposal will need to be further communicated to, and approved by, the Ministry of Forests, Lands, and Natural Resource Operations. Provided the rehabilitation concept is endorsed by the Ministry of Forests, RDI supports the rehabilitation objective and considers the plan to have acceptable impact in the short term and will support quick recovery in the long term to meet the VQO from all viewpoints. Green-up in the lower blocks was reaching 2.5-3m in 2014.

Percent Alteration Calculations based on Landform Component of VSU 1143 from Viewpoints (in perspective view)

Viewpoint 1730 Percent Alteration with Roadside Screening

Percent /	Percent Alteration VP 1730 Wide					
Name	Area	%Alt.				
VSU	513564.7					
87597-9	802.5	0.2%				
AL7VP	2504.6	0.5%				
87597-8	558.8	0.1%				
AL7VR-2	2900.6	0.6%				
AL7VR-1	3504.2	0.7%				
D076F-2	9724.4	1.9%				
D076F-3	2120.7	0.4%				
D076F-1	11742.6	2.3%				
D076F-4	1127.1	0.2%				
D076F-5	1599.6	0.3%				
AL7VN	265.8	0.1%				
AL7VR-3	195.1	0.0%				
Sum	37046.0	7.2%				

Percent Alteration VP 1734

Viewpoint 1730.3 Percent Alteration

Name	Area	%Alt.
VSU	219955.8	
87597-6	724.8	0.3%
AL7VN	85.9	0.0%
AL7VN	1677.5	0.8%
AL7VP	1973.6	0.9%
87597-8	514.9	0.2%
AL7VQ	32.1	0.0%
AL7VQ	176.8	0.1%
AL7VR	1514.5	0.7%
AL7VR	1821.0	0.8%
DO76F	6320.9	2.9%
DO76F	5636.7	2.6%
DO76F	331.4	0.2%
DO76F	984.8	0.4%
87597-9	138.0	0.1%
Sum	21932.8	10.0%

Name	Area	%Alt
VSU	101943.41	
87597-6	667.26	0.7%
AL7VN	119.29	0.1%
AL7VN	1426.42	1.4%
87597-9	259.75	0.3%
AL7VP	2318.25	2.3%
AL7VQ	506.29	0.5%
AL7VR	1316.91	1.3%
AL7VR	1699.44	1.7%
DO76F	237.96	0.2%
DO76F	491.23	0.5%
Sum	9042.79	8.9%

FOREGROUND ALTERATIONS AND SCREEN DESIGN

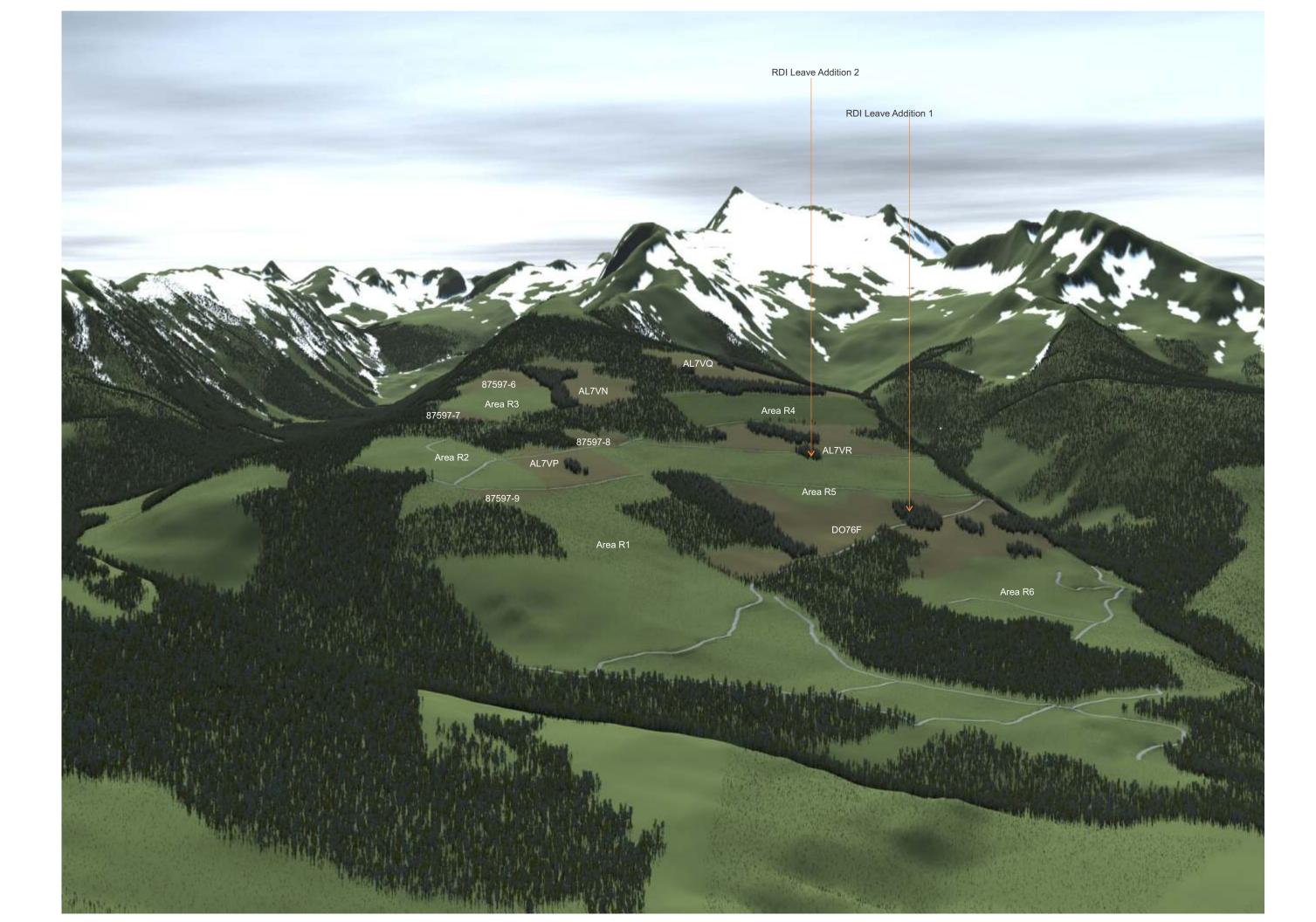
Is the proposed alteration within 1 kilometre of the viewing locations? Does vegetative or landform screening exist?	yes□ no X □ YES X□ NO □
If yes, what type: Deciduous ☐ Coniferous X ☐ Mixed Forest ☐ Landform Would the screen hide proposed operations?	n □ YES X□ some X□ □
Is vegetative screen designed properly ie responds to lines of force, shape & scale and remains a viable unit for future removal? Is vegetative screen expected to be windfirm?	YES X□ NO □ N/A □ YES X□ NO □ N/A □
If alteration would not be screened or only partially screened, describe the impact in the immediate foreground (e.g. landing location, roadside clean-up, etc.) N/A	

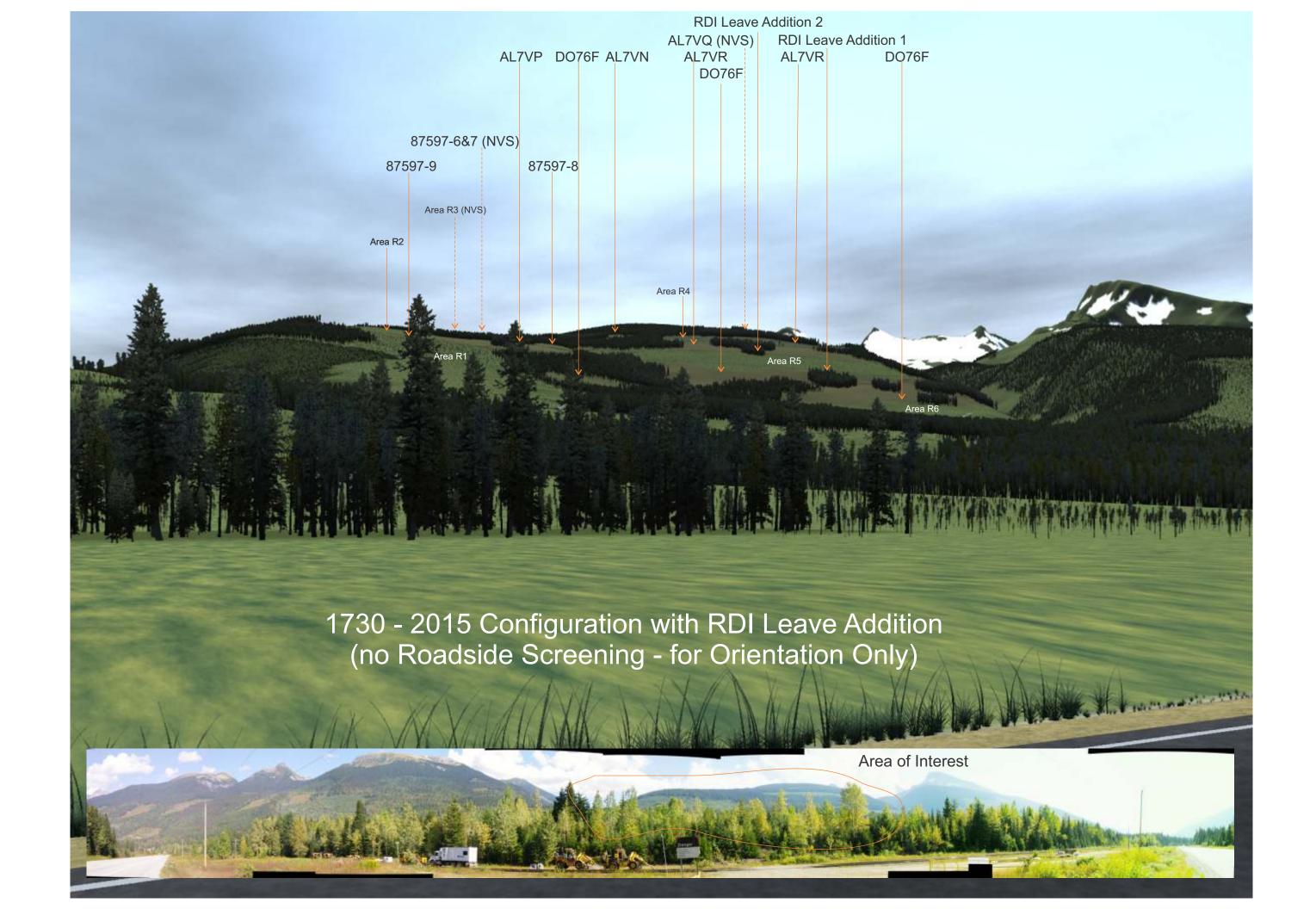
ADDITIONAL CONSIDERATIONS

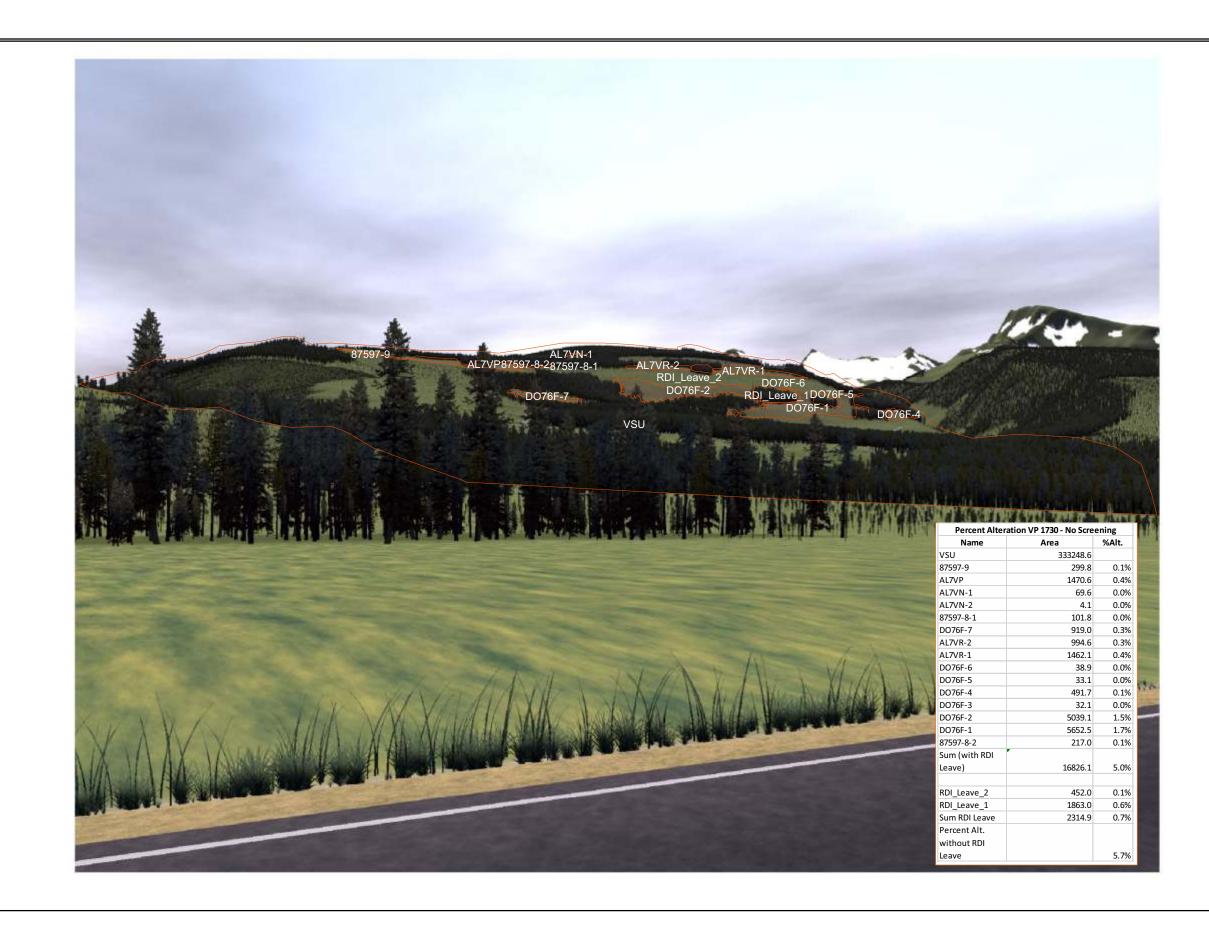
Does the EVC in adjacent units exceed the established VQO for those units a the management of the present unit proposed for alteration? YES	nd how would this affe NO X□	ect		
Comments: EVC in VSU 1225 is reaching PR, though inventory shows it as I	MM			
Has this VIA submission incorporated all known alterations proposed within the Visual Sensitivity Unit for the next 5				
years? (i.e. all blocks proposed by the same or different licensees) Comments:	YES X	NO□		
Comments.				

Completed by: Ken B. Fairhurst, R.P.F.

Date Completed: June 8, 2015

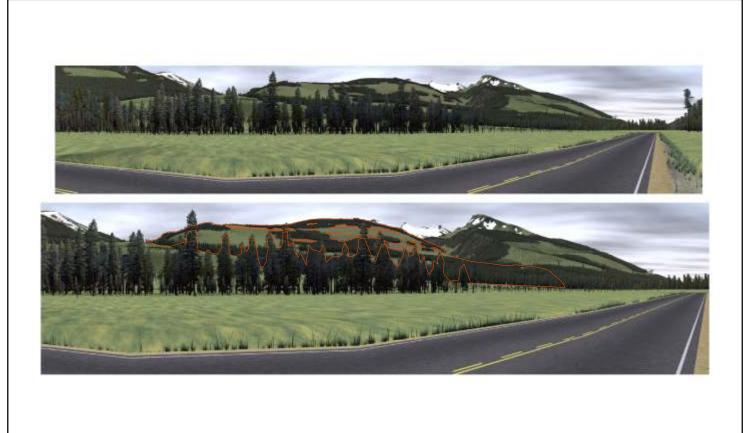






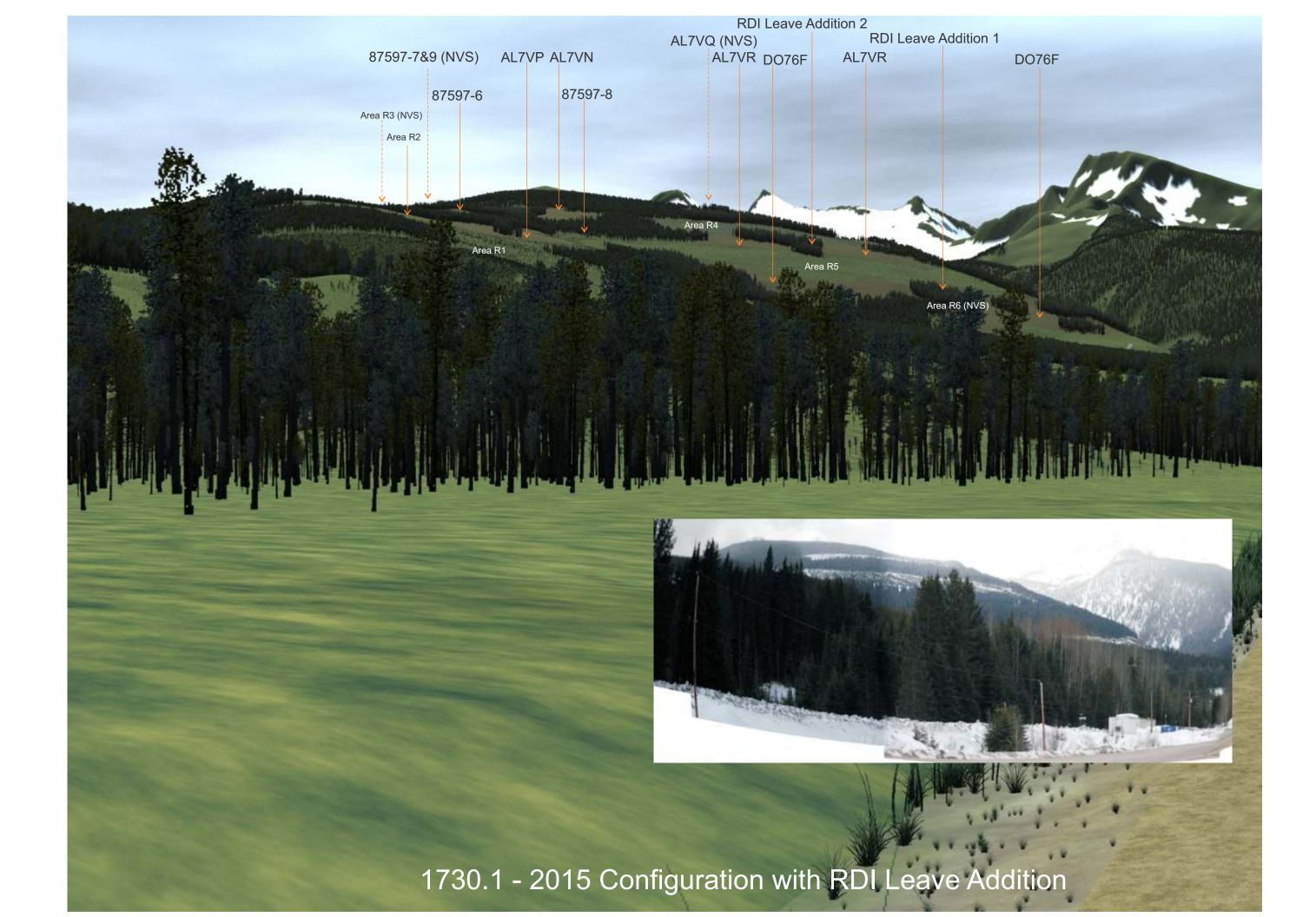
1730 - 2015 Configuration with RDI Leave Addition (no roadside screening - not a true view)
Percent Alteration with RDI Leave - 5.0% - Without RDI Leave - 5.7%
Use for Orientation Only

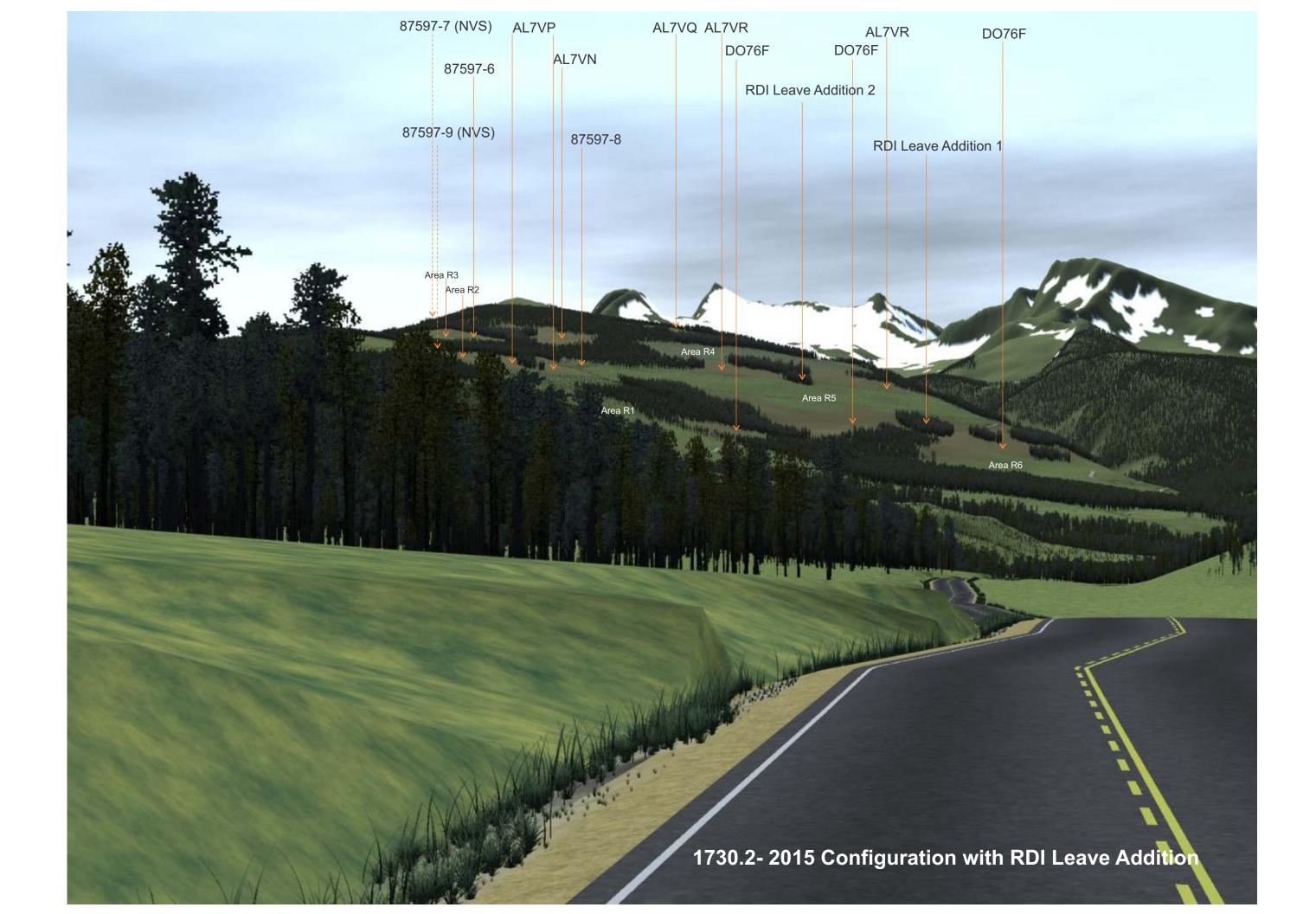


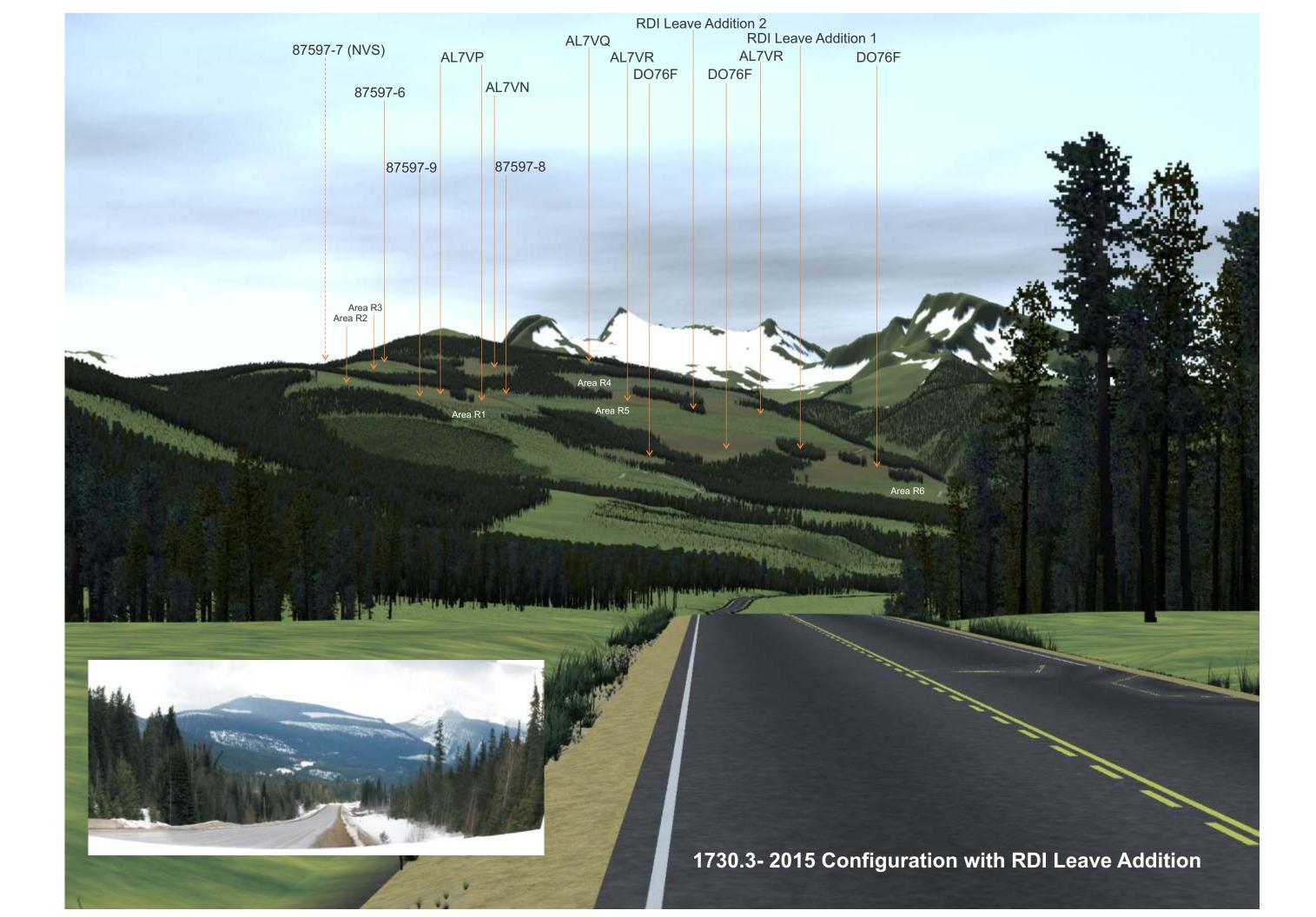


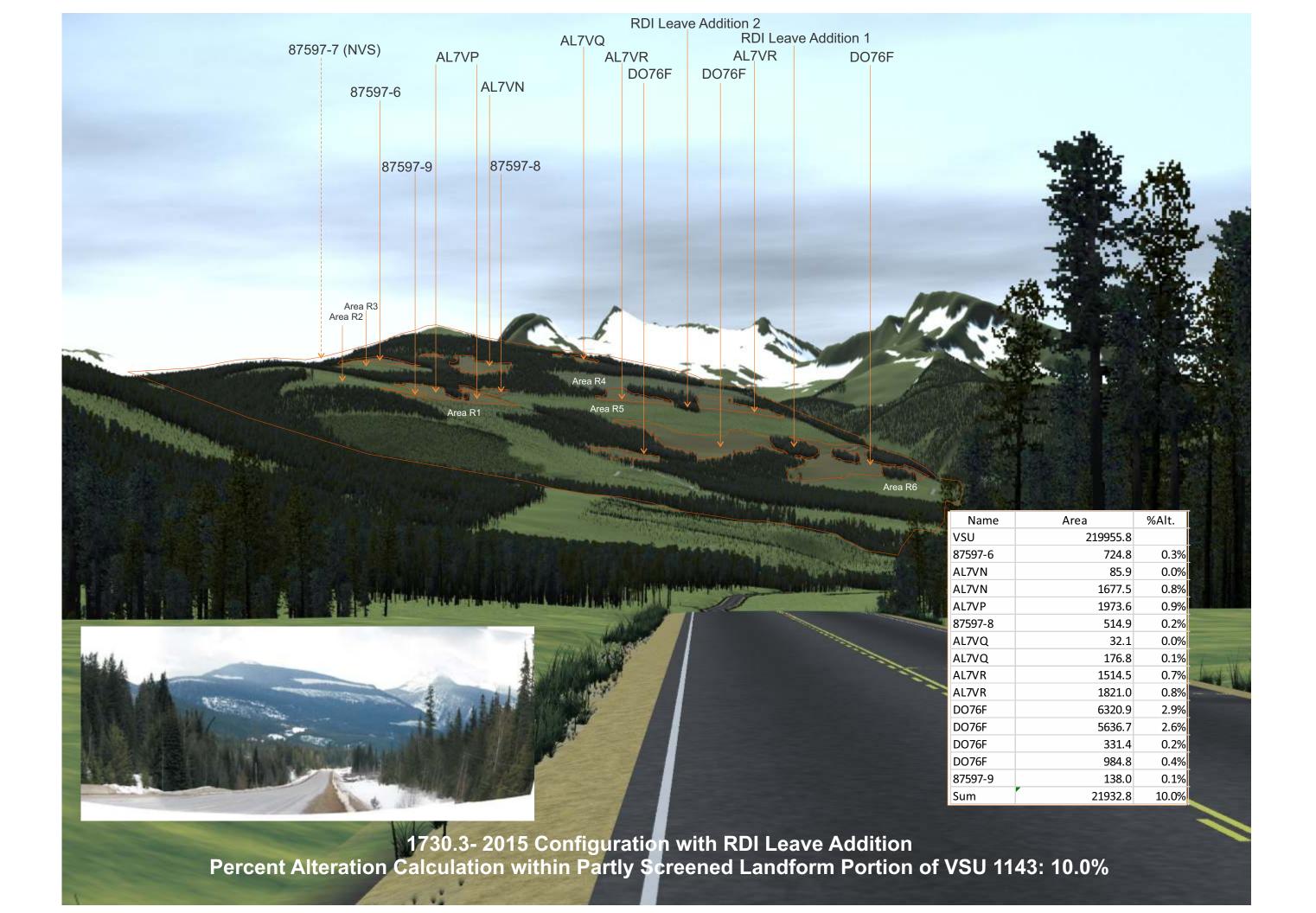
Percent Alteration VP 1730 Wide		
Name	Area	%Alt.
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D076F-5	1599.6	0.3%
AL7VN	265.8	0.1%
AL7VR-3	195.1	0.0%
Sum	37046.0	7.2%

1730 - 2015 Configuration with RDI Leave Addition
Percent Alteration in Perspective View - 7.2% of Landform (partly screened - as outlined)

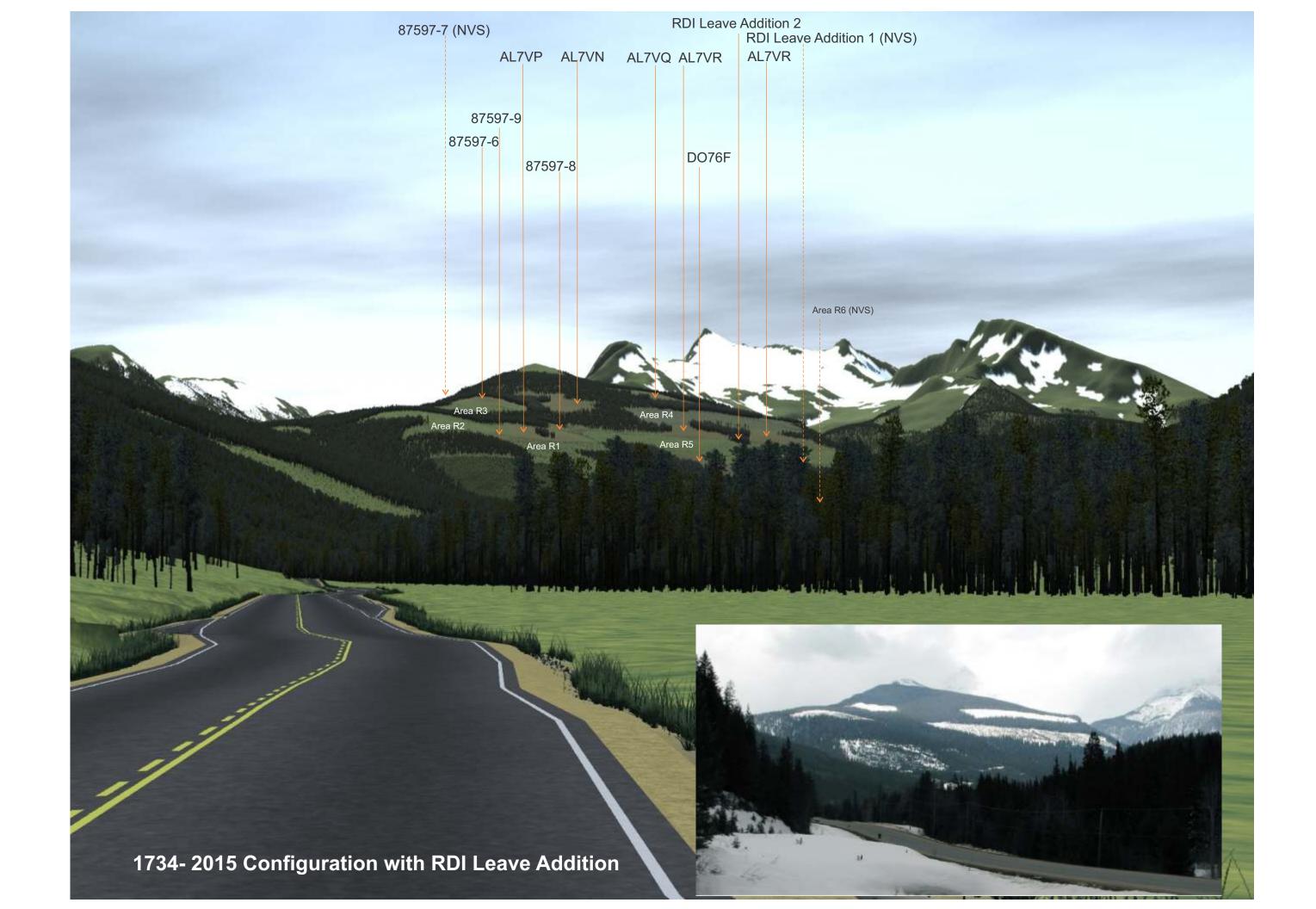


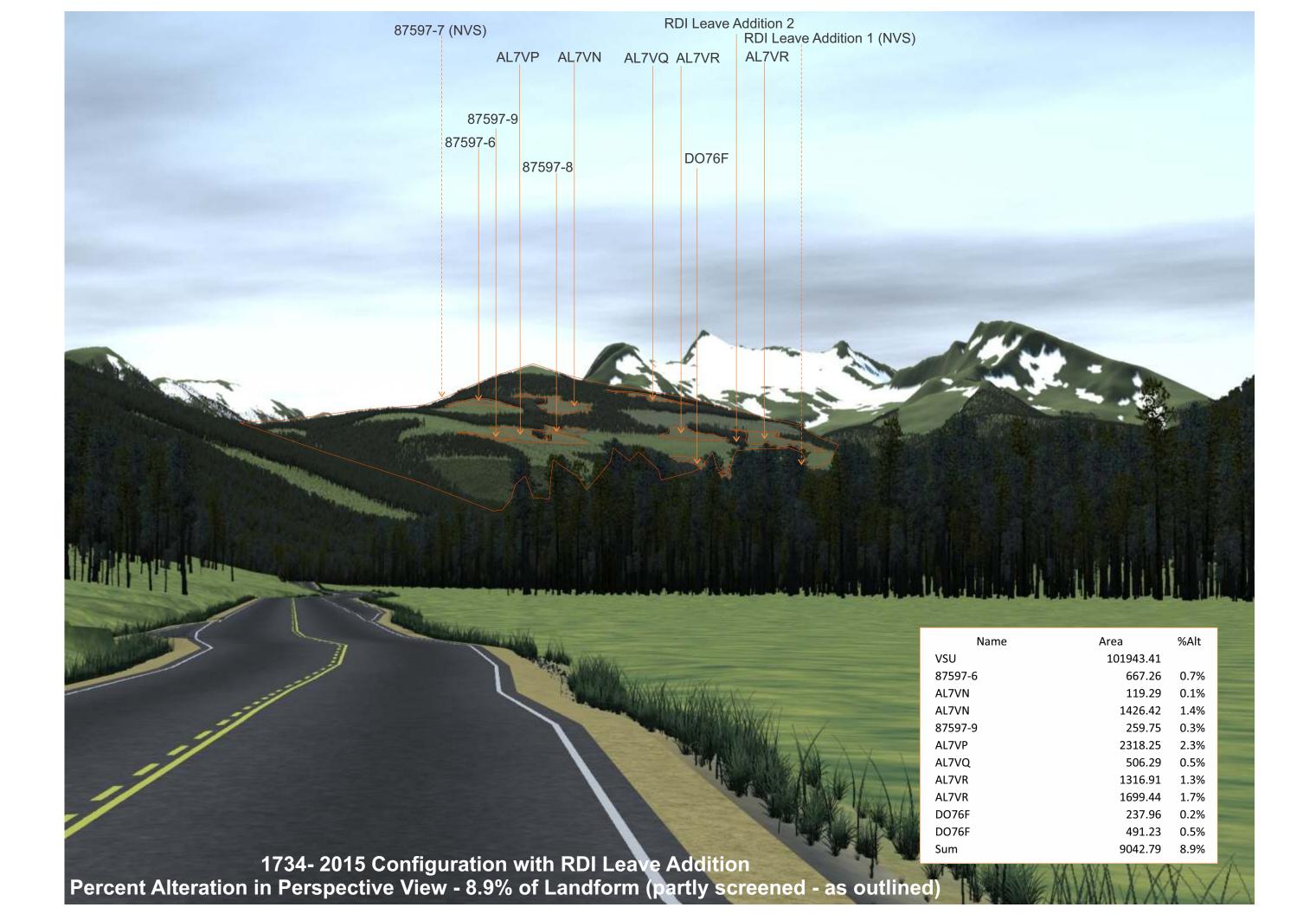


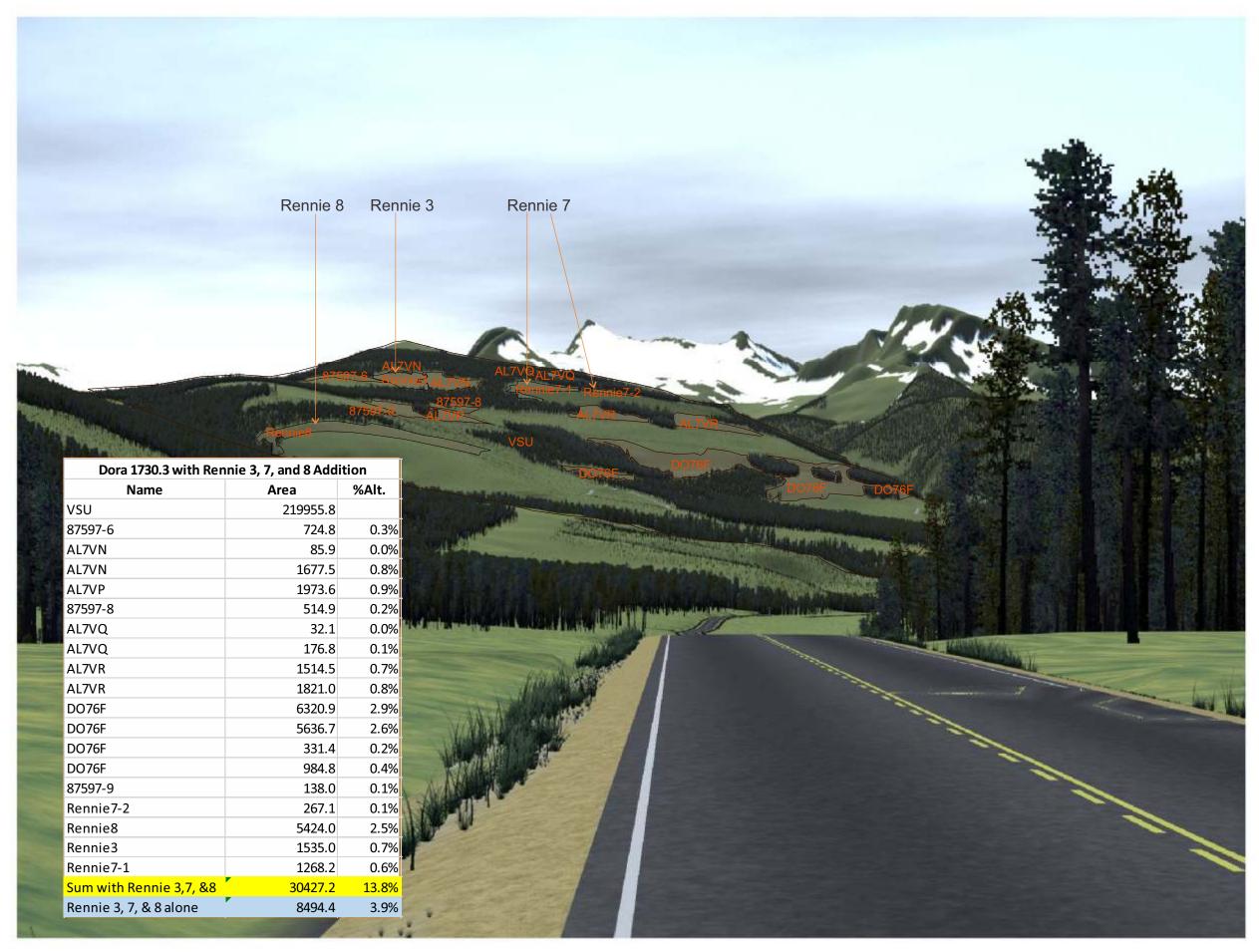












1730.3- 2015 Configuration with RDI Leave Addition plus Rennie Units 3,7 and 8 Percent Alteration Calculation within Partly Screened Landform Portion of VSU 1143: 13.8%