	Alaska	DOT&PF Rock Slope	e Rating (Calculator			
Fill in orange cells				Rated By LT - AEM			
/er. 1.2b Jan 2021	12/2021 copied to V1	1.2, updated AADT to 2020 & mi	lepoints	Rating Date 10/17/2014			
Site Information	,	Site ID 2995000003392014			14		
	South Coast Region	Community	CKVC/MVA	Rockfa			
•		•		AAINT DISTRICT Rock Avalanche			
	KLONDIKE HIGHWAY						
CDS Route Number		Maint. Station	SKAGWAY	Planar Failure	YES		
Road and Highway No.				1	VEC		
Hwy MP		Common Name		Wedge Failure			
CDS Milepoint		B-Slope		Toppling Failure			
	59.50789	Mitigation Present		Raveling/Undermining			
_	-135.25570	Site Rating Status		Block Failure			
Comments	both ends. Rockfall u	up to 4' max dimension has bou		rounds curve heading south. Transiti out across rd. Pullout along highest pa			
Site Measurements	Character Count	237					
Slope Height (ft)	105	Roadway Width (ft)	27	Sight Distance (ft)	300		
Slope Length (ft)		Speed Limit (mph)		AASHTO DSD (ft)	600		
Block Size (ft)				. '!			
, ,		Annual Precipitation (in)	90	GIS Alaska Precipitation Map - http://ard	.y.IS/1KMNCUN		
Event Volume (cy)		AADT (Count)	410	AADT updated to 2020 counts			
valuation Result Sumn	nary (Class B slope	es are all classified in "Good	d" Condition	n)			
Condition Index	43	Total USMP Rating	521	Programmatic Improver	ment Cost to CS		
Condition State		Hazard Rating		Note calculation is programmatic and does	\$ 1,992,900		
Condition State Text		Risk Rating	l	not reflect site-specific needs. Actual costs	, ,== ,==		
				may differ significantly.			
Slope Hazard Rating	(Class A unstable	slopes only)					
				Highest of size or volume scores	47		
		_		Slope Height Score	100		
Case 1 Structure Score	27	Discon. Fav, discon rand, discor	n adverse, cont	t. adverse			
Case 1 Joint Friction Score	20	Rough irreg, undulating, plana	r, clay filled/sli	cks			
Case 2 Features Score		Few features, Occ, Many, Majo	r				
Case 2 Diff Erosion Score		Small diff, Mod, Large w/ fave,	Large w/un fa	ve			
		Geologic Chara	icter Score (Hig	ghest sum of Case 1 or Case 2 Scores)	47		
Ditch Effectiveness Score	27	Good, Moderate, Limited, None					
				Ditch Effectiveness Score	27		
Maintenance Freg. Score	81	Sched. ditch maint, patrols after storms, daily seasonal patrols, daily patrols					
	02	Maintenance Frequency Score					
Rockfall History Score	50	Maintenance Frequency Score 81 Few, Occ, Many, Constant					
Nockian instory score		rew, occ, many, constant		Rockfall History Score	50		
Annual Precipitation Score	81	1		Hockyall History Score	30		
Slope Drainage Score		Dry or well drained, intermittent water, usually on slope, always on slope					
Slope Drainage Score	9	Dry or well drained, intermittent water, usually on slope, always on slope Water on Slope Score					
				Hazard Subtotal	45 397		
				Hazard Subtotal	397		
Slope Risk Rating	(Class A unstable	slopes only)					
				Decision Sight Distance Score	47		
				Roadway Width Score	31		
				AADT Score	3		
% Time Car Within Site	16%	1		'			
				Average Vehicle Risk Score	2		
Impact on Traffic Score	20	Minor Delay, One Lane Open, 1	00 mi or 1 day				
			or _ day	Traffic Impacts Score	20		
ROW Impacts Score	3	None, minor, private prop-no si	tructures stru		20		
now impacts score	3	wone, minor, private prop-no s	נוטננטוכט, אווטנ		3		
Fault from 1 0	Right of Way Impacts Score						
Envir. Impacts Score	0	2ero points if no environmental impacts are likely, 50 pts if some possible					
		1		Environmental Impacts Score	0		
Maint. Complexity Score	9	Routine, Specialized equip, diffi	icult effort/loc				
				Maintenance Complexity Score	9		
Event Cost Score	9	\$10k, \$50k, \$100k, \$250k in red	asonable worst				
				Event Cost Score	9		
				Risk Subtotal	124		

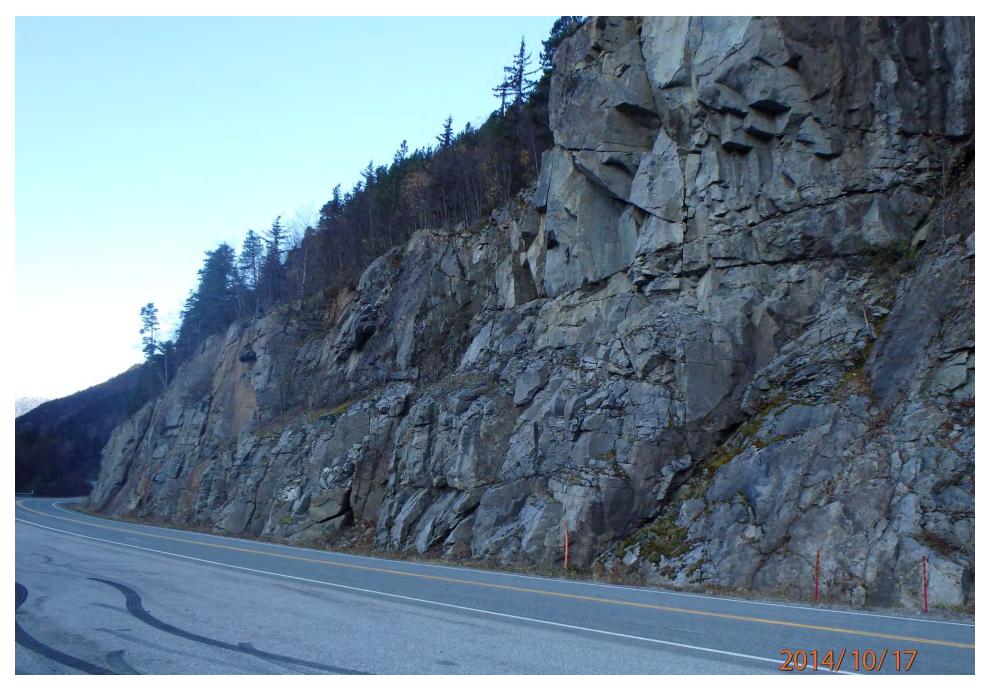
Risk Subtotal

124



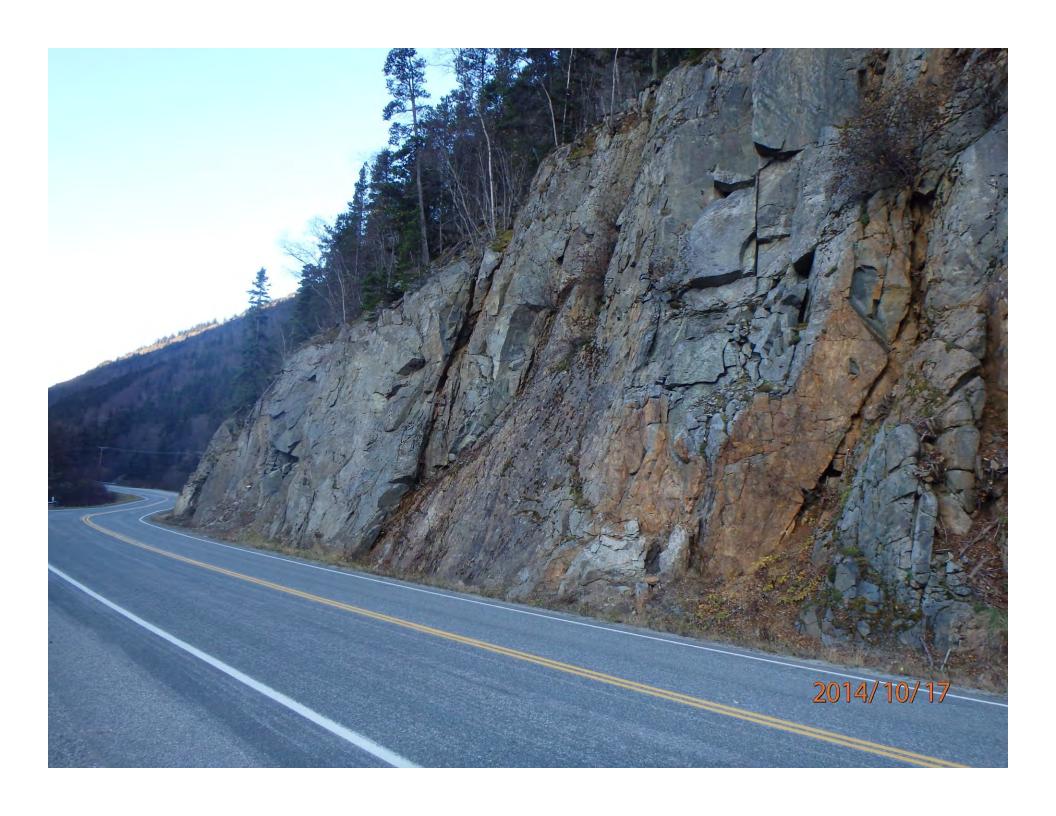
Ver. 1.1 Dec 2017				Rated By	LT - AEM	
				Rating Date	10/17/2014	
Site Information				Site ID	2995000003412014	
			1			
Region	SR		Communit		Rockfa	
Highway Name	KLONDIKE F	IIGHWAY	Maint. Distric		Rock Ava	
			Maint. Station	SKAGWAY	Planar	
CDS Route Number	299500				Wedge	
Highway Milepost	5.05		Common Name		Toppling	
CDS Milepoint	3.41		B-Slope		Raveling/Under	_
Latitude	59.50789		Mitigation Present		Block	Failure YES
Longitude	-135.2557		Site Rating Status	ACTIVE		
Comments	5 Mile Cut.	Height increa	sing from about 30 ft t	o over 100 ft as cut rounds cu	irve heading south. Tr	ansition to B-
	slope at bot	h ends. Rock	fall up to 4' max dimen:	sion has bounced into pullou	t across rd. Pullout ald	ng highest
	part of cut.					
Site Measurements						
Slope Height (ft)	105		lway Width (ft) 27		Sight Distance	300
Slope Length (ft)	2000		ed Limit (mph) 40		AASHTO DSD (ft)	
Block Size (ft)	3.5	Annual Pr	ecipitation (in)	GIS Alaska Precipitation Iv	pp – https://arcg.is/1kmhCUN	
Event Volume (cy)	0		AADT (count) 30	GIS 2012/2013 AADT Mup	- https://arcg.is/1MnAI6W	
			X			
Site Summary						
Condition Index	42.989040	Tota		9 Programmatic II	mprovement Cost to	CS1
Condition State	3		Hazard Rating 39	7		3985800
Condition State text	FAIR		Risk Rating 82		tic and does not reflect site-	
Slana Hazard Pating				specific needs. Actual	costs may differ significantly	
Slope Hazard Rating				F	lighest of size of volume scores	47
Case 1 Stru	cture Score	27	Discon, Fay, discon rand, disco	on adverse, cont. adverse	Slope Height Score	100
Case 1 Joint Frie		20		ar, clay Med/slickensides		
Case 2 Fear		0	Few features, Occ. Many, Ma			
Case 2 Diff En		0	Small diff, mod, Large w/fave			
case 2 Din En	Join Score	U	Sindir dijj, vilod, Edige W/jave,		um of Case 1 or Case 2 Scores)	47
Ditch Effective	ness Score	27	Good, Moderate, Limited, No.	ne	Ditch Effectiveness Score	27
Maintenance	Freq. Score	81	Sched. Ditch maint, patrols af	ter storms, daily seasonal patrols, daily patr	rols Maint. Freq. Score	81
Rockfall His	story Score	50	Few, Occ, Many, Constant		Rockfall History Score	50
Annual Pr	ecip. Score	81			Annual Precip Score	81
Slope Drai	nage Score	9	Dry or well drained, intermitte	ent water, usually wet, always wet	Water on Slope Score	45
		•			Hazard Subtotal	397
Slope Risk Rating						
					Decision Sight Distance Score	6
					Roadway Width Score	31
					AADT Score	2
% Time Car	Within Site	2			Average Vehicle Risk Score	2
Impact on T	raffic Score	20	Minor Delay, One Lane Open,	100 mi or 1 day closure, no detour or 3 day	s+ Traffic Impact Score	20
ROW Im	pact Score	3	None, Minor, Private property	y-no structures, structures/roads/RR/util/pa	rks ROW Impacts Score	3
Environ. Imp		0	Zero points if no environment	al impacts are likely, 50 pts if some possible	Environ. Impacts Score	0
Maint. Compl		9	Routine, Specialized Equip, Di	fficult effort/location, Complex/dangerous	Maint. Complexity Score	9
Maintenance	•			ter storms, daily seasonal patrols, daily pati		
	Cost Score	9	\$10k, \$50k, \$100k, \$250k in r		Event Cost Score	9
			_		Risk Subtotal	82

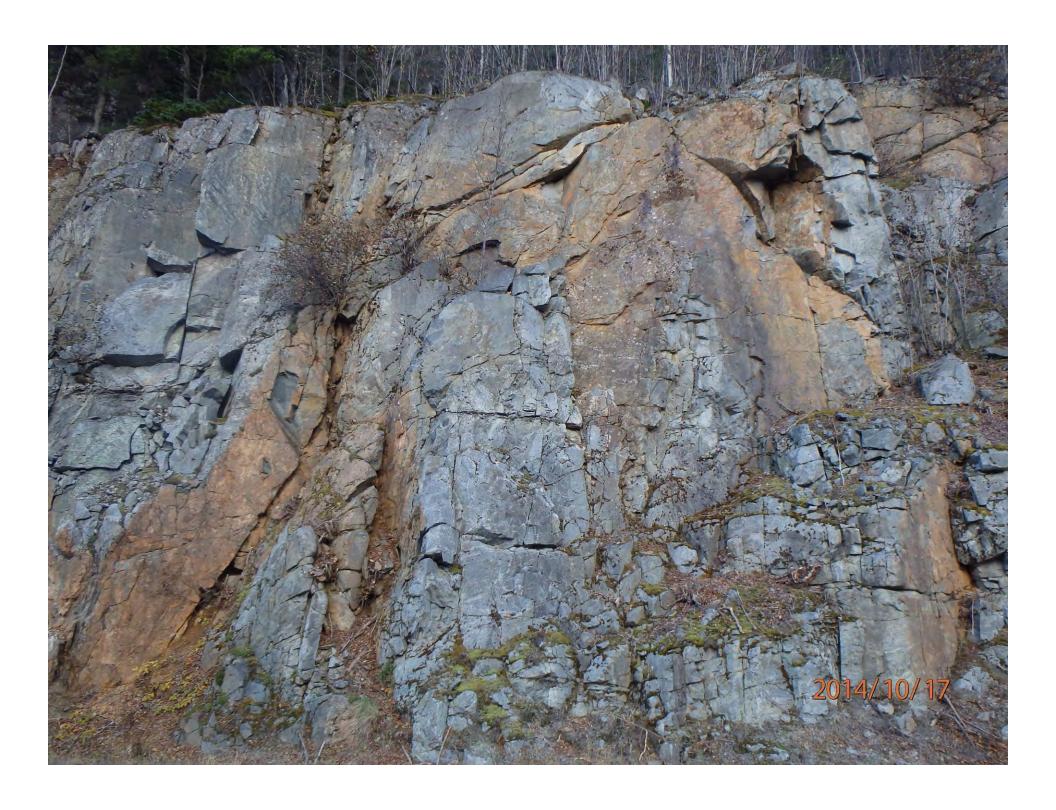
KLONDIKE HIGHWAY





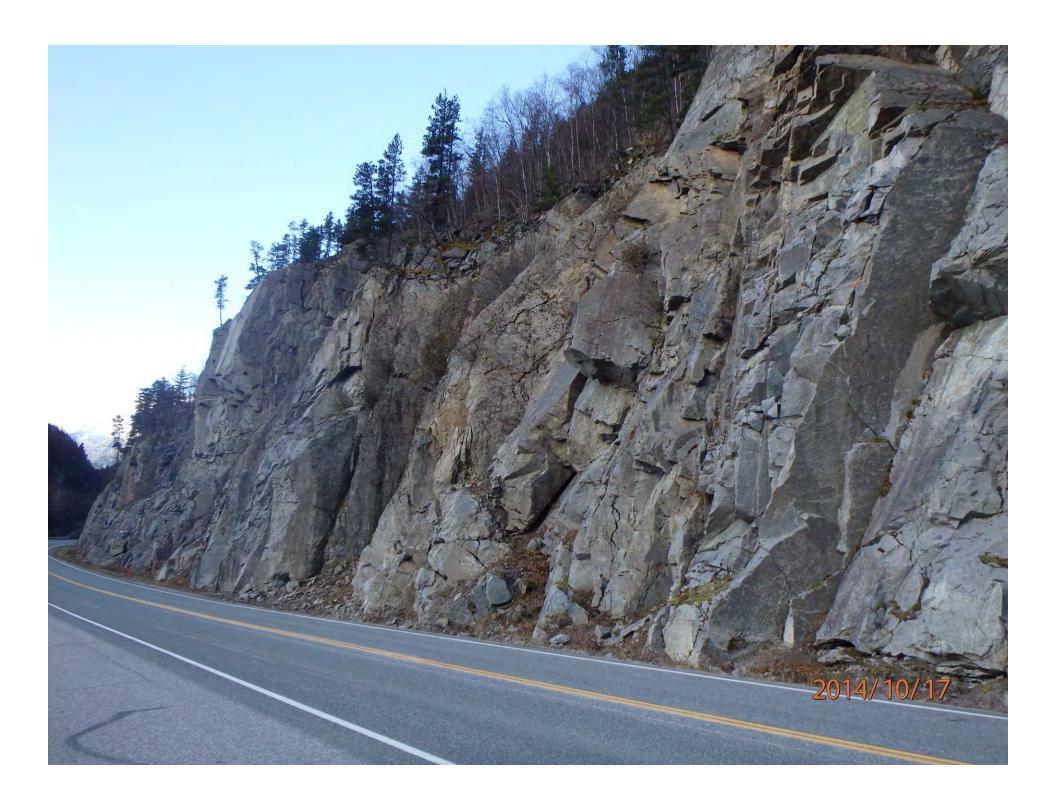


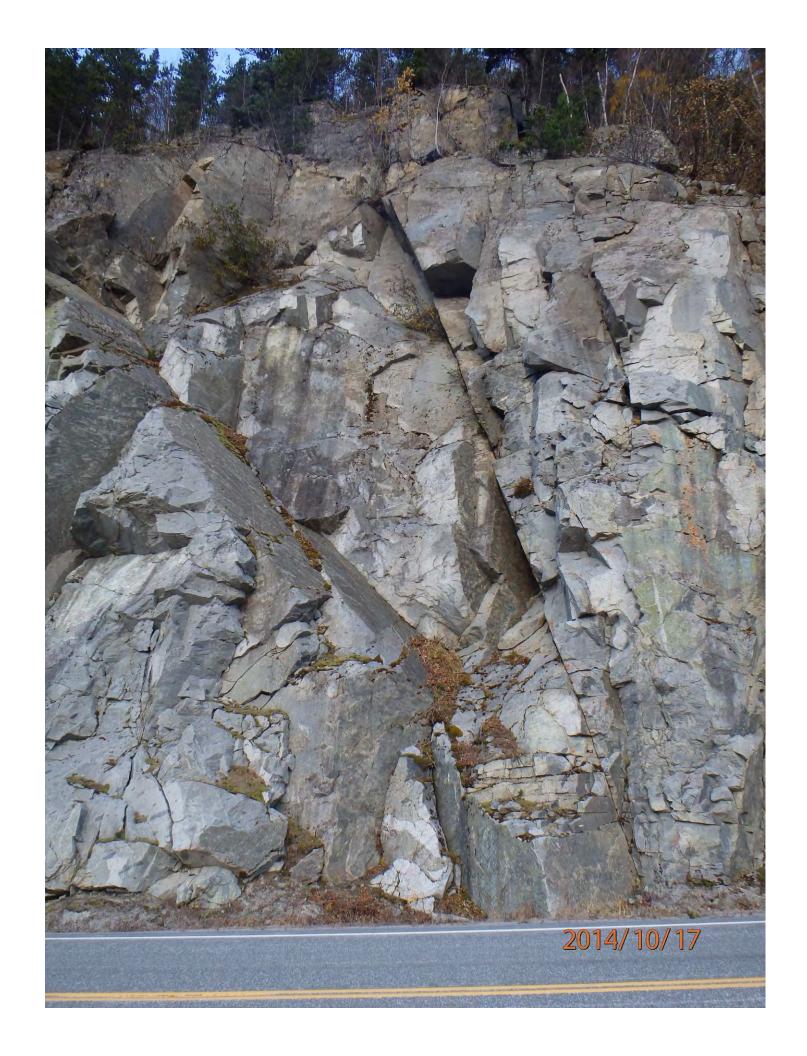












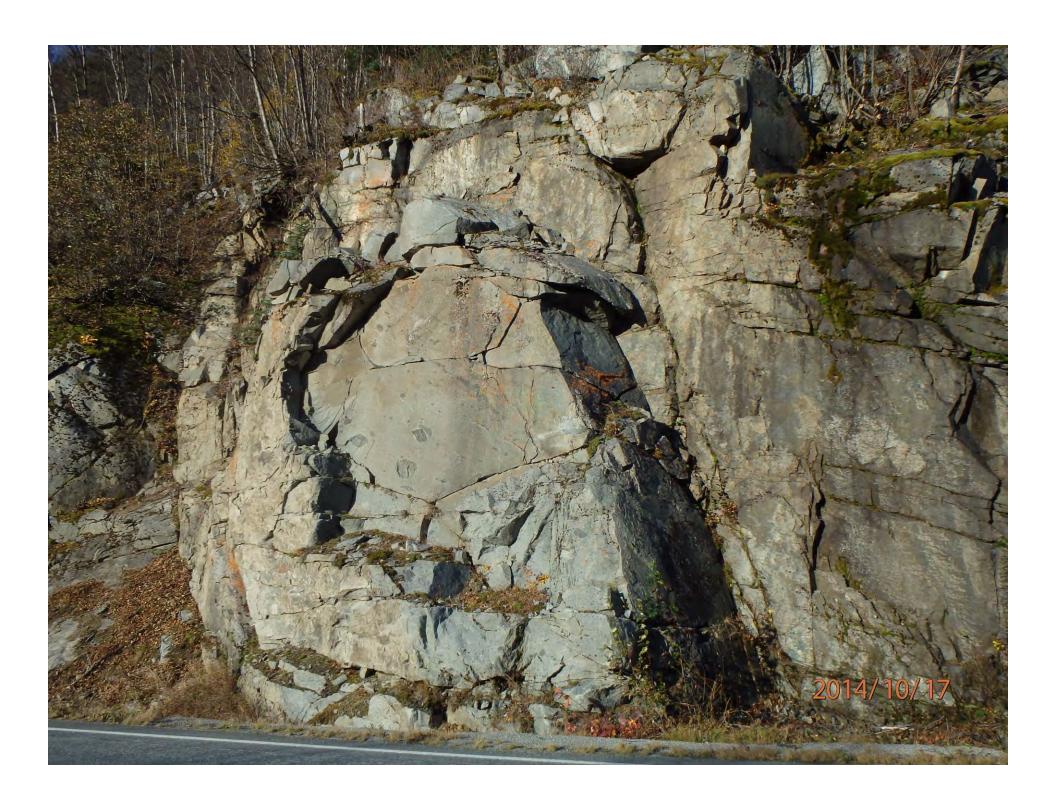


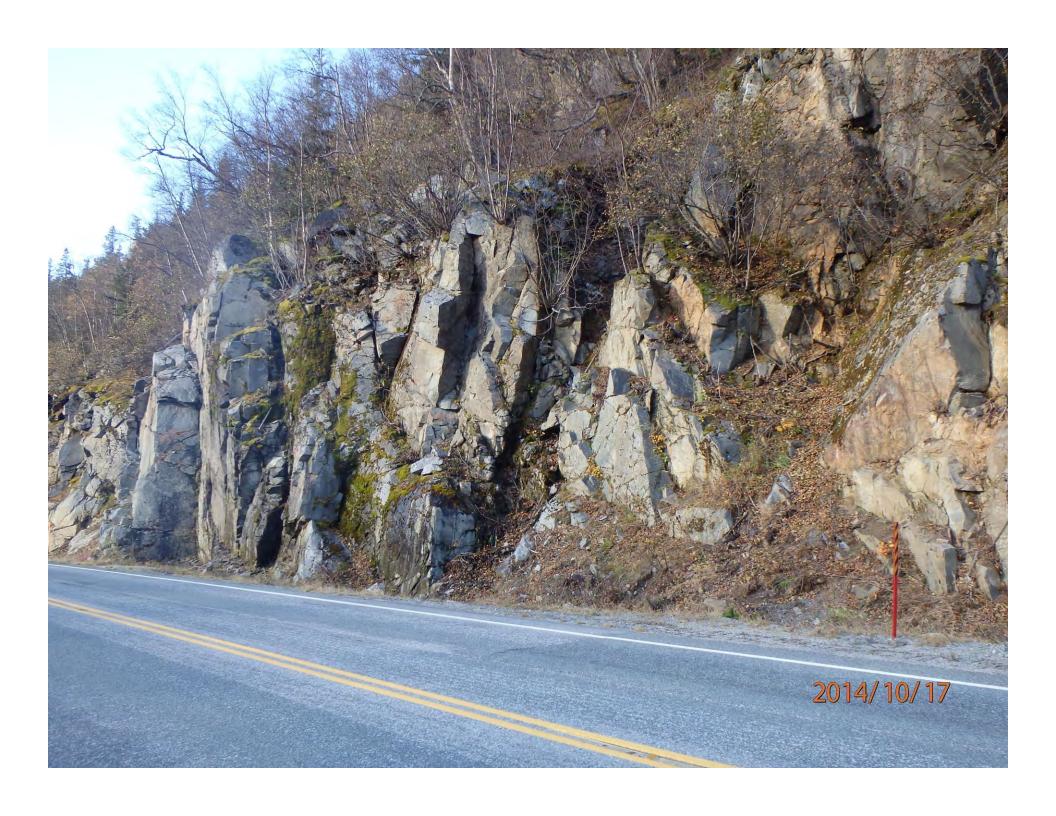


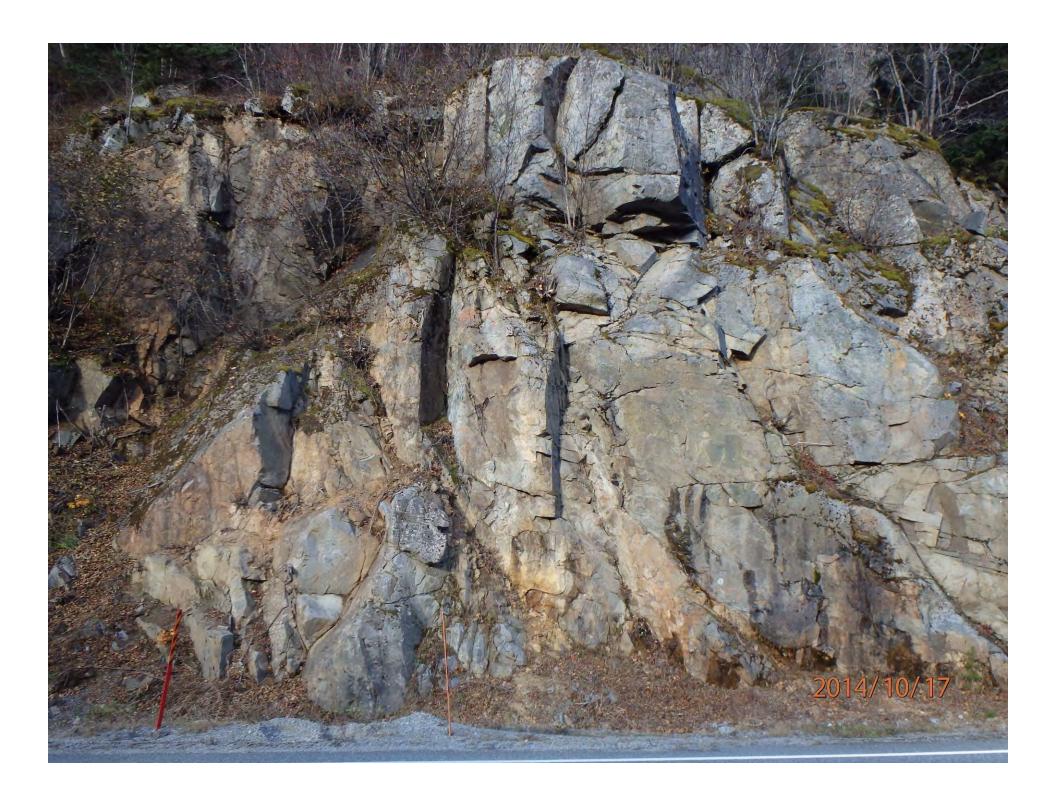


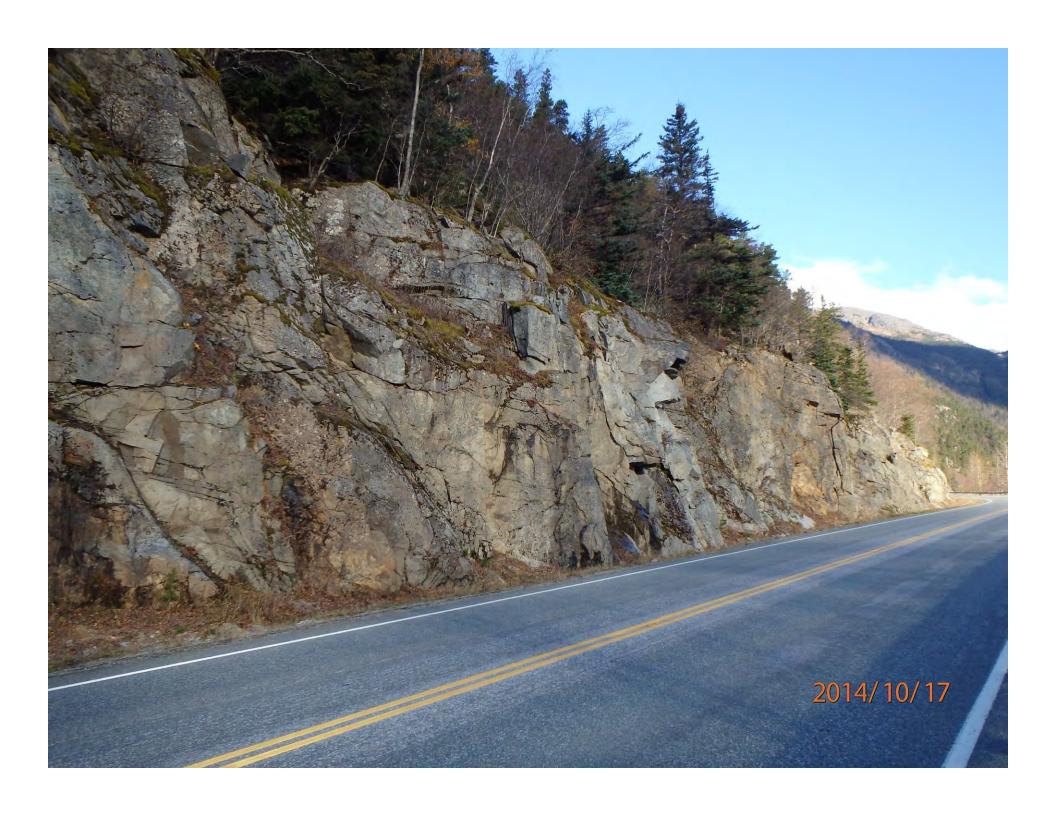




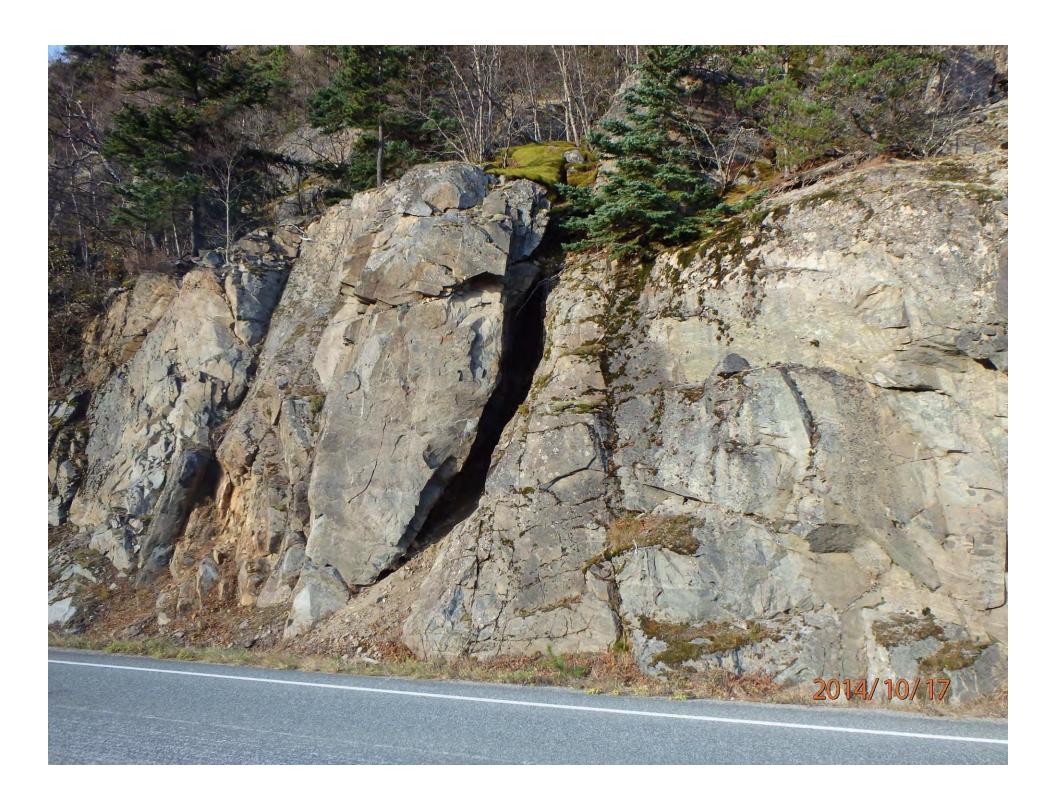


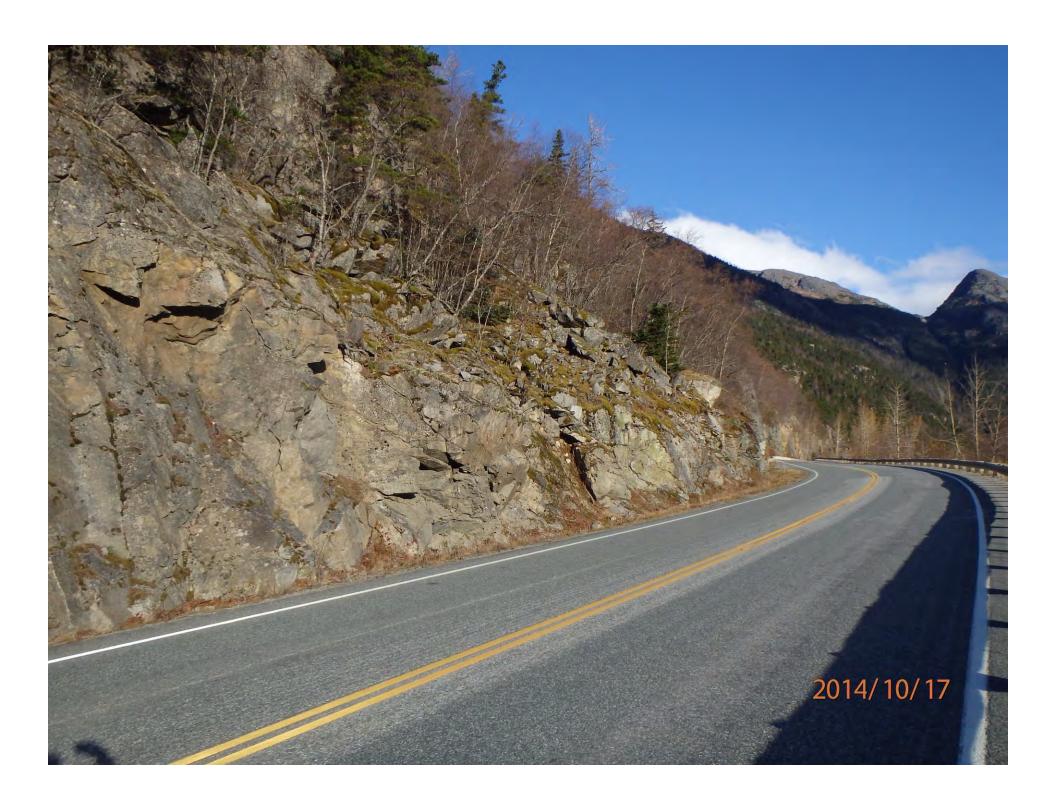


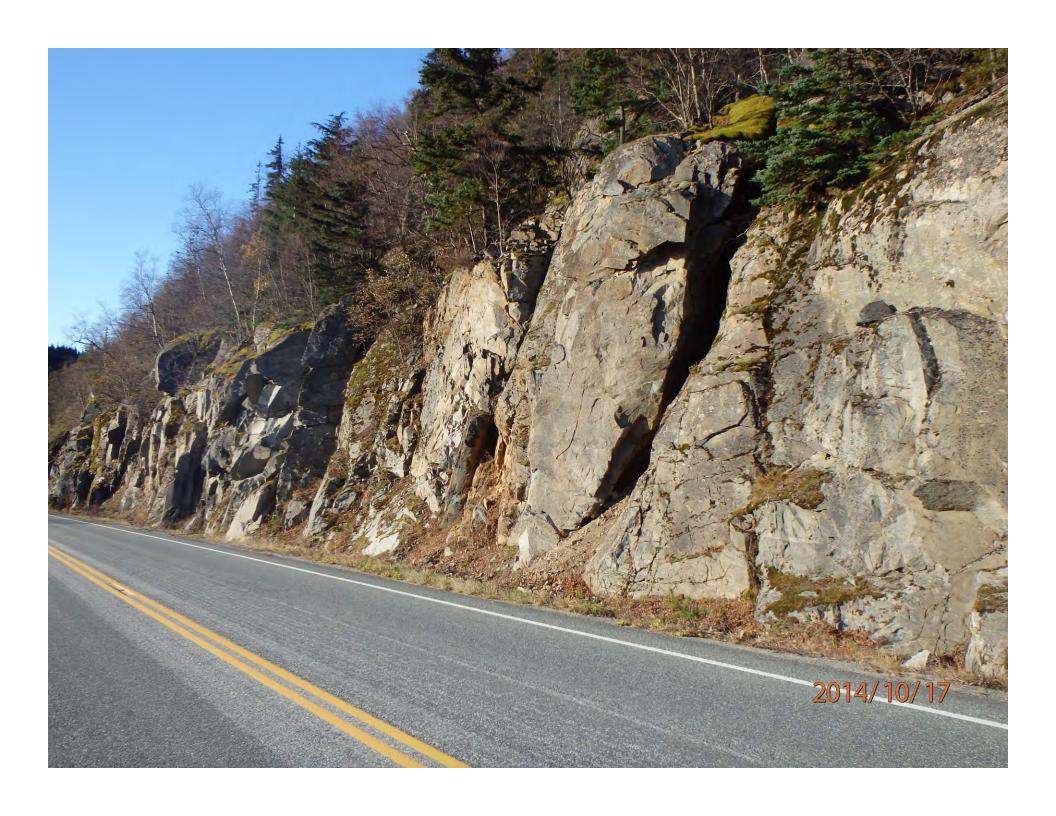








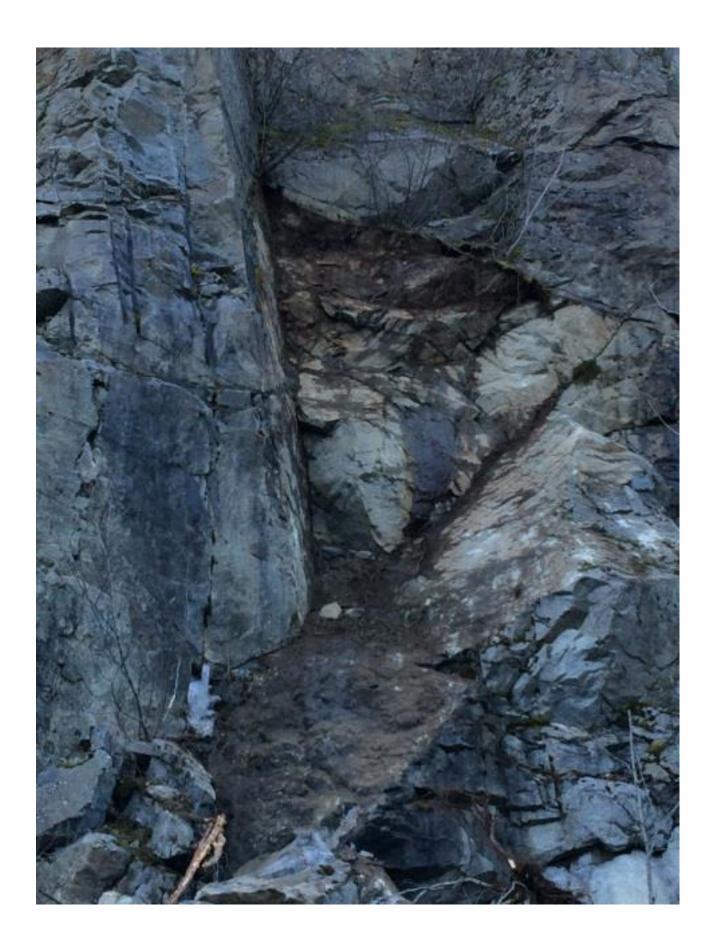
















	Alaska	DOT&PF Rock Slope	e Rating (Calculator			
Fill in orange cells				Rated By LT - AEM			
Ver. 1.2b Jan 2021	12/2021 copied to V1	copied to V1.2, updated AADT to 2020 & milepoints Rating Date 10/17/2014					
Site Information			Site ID 2995000003662014				
Region	South Coast Region	Community	SKAGWAY	Rockfa	all Type		
	KLONDIKE HIGHWAY	Maint. District	SOUTHEAST N	AINT DISTRICT Rock Avalanche	NO		
CDS Route Number	299500	Maint. Station	SKAGWAY	Planar Failure	NO		
Road and Highway No.	2041009X000			-			
Hwy MP	5.31	Common Name		Wedge Failure	YES		
CDS Milepoint	3.66	B-Slope		Toppling Failure	NO		
Latitude	59.51132	Mitigation Present	YES	Raveling/Undermining	YES		
•	-135.25365	Site Rating Status		Block Failure			
Comments				10 years old. Draped mesh torn alon	-		
		ome damage to concrete jersey	barriers appa	rent. Most rockfall from wedge failu	res in highly		
	fractured rock.						
VI B.A	Character Count	248					
Site Measurements							
Slope Height (ft)		Roadway Width (ft)	25	Sight Distance (ft)			
Slope Length (ft)	430	Speed Limit (mph)	40	AASHTO DSD (ft)	600		
Block Size (ft)	2.5	Annual Precipitation (in)	90	GIS Alaska Precipitation Map - http://ar	cg.is/1kmhCUN		
Event Volume (cy)		AADT (Count)	410	AADT updated to 2020 counts			
Evaluation Result Sumn	nary (Class B slope	s are all classified in "Good	d" Condition	n)			
Condition Index	63	Total USMP Rating		Programmatic Improve	ment Cost to (
Condition State	2	Hazard Rating	213	Note calculation is programmatic and does			
Condition State Text		Risk Rating	204	not reflect site-specific needs. Actual costs	7 77,3.		
			204	may differ significantly.			
Slope Hazard Rating	(Class A unstable	slopes only)					
				Highest of size or volume scores	16		
				Slope Height Score	5		
Case 1 Structure Score		Discon. Fav, discon rand, discor					
Case 1 Joint Friction Score	27	Rough irreg, undulating, planar, clay filled/slicks					
Case 2 Features Score		Few features, Occ, Many, Majo					
Case 2 Diff Erosion Score		Small diff, Mod, Large w/ fave,	. ,		100		
Divide Effection on Comme	0	_		ghest sum of Case 1 or Case 2 Scores)	108		
Ditch Effectiveness Score	9	Good, Moderate, Limited, None	2	Ditals Effectives and Conse	0		
Maintenance Freq. Score	3	Ditch Effectiveness Score 9 Sched, ditch maint, patrols after storms, daily seasonal patrols, daily patrols					
Maintenance Freq. Score	5	Sched. ditch maint, patrols after storms, daily seasonal patrols, daily patrols					
Rockfall History Score	27	Few, Occ, Many, Constant					
ROCKIAII HISTORY SCORE		rew, Occ, Many, Constant		Rockfall History Score	27		
Annual Precipitation Score	81]		Nockjuli History Score			
Slope Drainage Score		Dry or well drained, intermitter	nt water usual	lly on slone, always on slone			
Stope Braniage Store		Dry or wen aramea, intermitter	it water, asaar	Water on Slope Score	45		
				Hazard Subtotal			
Slope Risk Rating	(Class A unstable	slopes only)					
				Decision Sight Distance Score	93		
				Roadway Width Score	41		
		1		AADT Score	3		
% Time Car Within Site	3%						
		1 .		Average Vehicle Risk Score	1		
Impact on Traffic Score	9	Minor Delay, One Lane Open, 1	00 mi or 1 day				
-		1,, ,		Traffic Impacts Score	9		
ROW Impacts Score	3	None, minor, private prop-no s	tructures, struc				
		l ₌		Right of Way Impacts Score	3		
Envir. Impacts Score	O Zero points if no environmental impacts are likely, 50 pts if some possible				_		
Maint Camplantin Ca	27	Danking Curricher I 1966	and a cc /	Environmental Impacts Score	0		
Maint. Complexity Score	27	Routine, Specialized equip, diffi	cuit effort/loc		27		
Event Cost Costs	27	\$10k, \$50k, \$100k, \$250k in red	rconableer	Maintenance Complexity Score	27		
Event Cost Score	21	אטטגל אטטגל אטטנל איז און דפנ איז איז א	isoliuble Worst	Event Cost Score	27		
				Risk Subtotal			





Risk Subtotal

Ver. 1.1 Dec 2017					Rated By	LT - AEM		
					Rating Date	10/17/2014		
Site Information					Site ID	2995000003672014		
Region	SR		Commur	nity SKA	GWAY	Rockfa	II Type	
Highway Name			Maint. Disti	-	ITHEAST	Rock Ava		NO
			Maint. Stat	ion SKA	GWAY	Planar Failure		NO
CDS Route Number	299500					Wedge Failure		YES
Highway Milepost	5.31		Common Nar	me 📉		Toppling	Failure	NO
CDS Milepoint	3.67		B-Slo	pe NO		Raveling/Under	mining	YES
Latitude	59.51132		Mitigation Prese			Block	Failure	YES
Longitude	-135.25365		Site Rating Sta	tus ACT	IVE			
Comments	No mitigation	on on norther	n 40 ft of cut. Existin	g mitigatio	n at least 10 years ol	d. Draped mesh torn	along sea	ams
	in multiple	locations. So	me damage to concre	te jersey ba	arriers apparent. Mo	ost rockfall from wedg	ge failures	s in
Cita Managamamama	highly fract	ured rock.						
Site Measurements		Door	dway Width (ft)			Cight Distance		_
Slope Height (ft) Slope Length (ft)	38		eed Limit (mph)	25		Sight Distance AASHTO DSD (ft)	225	
Block Size (ft)	430	•	recipitation (in)	40	GIS Alaska Precipitation Mi	up – https://arcg.is/1kmhCUN		
Event Volume (cy)	0	Ailliuai i i		302	GIS Alaska Precipitation Mi GIS 2012/2013 AAD Mon-	- https://arcg.is/1MnAI6W		
Event volume (cy)	U			302	0.02.012.2023.44.00	ncos / dreg.is/ ivin/ilov		
Site Summary								
Condition Index	62.5	Tota	USMP Rating	343	Programmatic In	mprovement Cost to	CS1	
Condition State	2			213			77533.30	000
Condition State text	FAIR			130	Calculation is programmat	ic and does not reflect site-	77333.30	300
Clana Harand Batina			7		specific needs. Actual co	osts may differ significantly		
Slope Hazard Rating					Н	ighest of size of volume scores	16	$\overline{}$
						Slope Height Score	5	-
Case 1 Stru	cture Score	81	Discon, Fay, discon rand, o	Niscon adverse, co	ont. adverse			
Case 1 Joint Fri	ction Score	27	Rough Irreg, undulating, p	ologiar, clay f il led/	slickensides			
Case 2 Fear	tures Score	0	Few Jeatures, Occ. Many,	Major				
Case 2 Diff En	sion Score	0	Small diff, mod, Large w/f				108	
Ditch Effective	nacc Scora	a	Good, Moderate, Limited,	Geolo	ogic Character Score (Highest su	um of Case 1 or Case 2 Scores) Ditch Effectiveness Score	9	$\overline{}$
Maintenance		3			aily seasonal patrols, daily patro	**	3	\neg
	story Score	27	Few, Occ, Many, Constant		any seasonar-patrons, dany patro	Rockfall History Score	27	\neg
	ecip. Score	81	Tew, occ, many, constant		•	Annual Precip Score	81	
	nage Score	9	Dry or well drained, intern	nittent water, usi	ually wet, always wet	Water on Slope Score	45	
•	Ü					Hazard Subtotal	213	\Box
Slope Risk Rating								
						Decision Sight Distance Score	20	
						Roadway Width Score	41	
						AADT Score	2	
% Time Car	Within Site	1				Average Vehicle Risk Score	1	
Impact on T		9	Minor Delay, One Lane Op	oen, 100 mi or 1 d	lay closure, no detour or 3 days	+ Traffic Impact Score	9	
	pact Score	3	None, Minor, Private prop	erty-no structure	es, structures/roads/RR/util/par	rks ROW Impacts Score	3	
Environ. Imp		0	Zero points if no environm	nental impacts are	e likely, 50 pts if some possible	Environ. Impacts Score	0	-
Maint. Compl	=	27	-		ocation, Complex/dangerous	Maint. Complexity Score	27	-
Maintenance	' - '	27	 		aily seasonal patrols, daily patro		27	-
Event	Cost Score	27	\$10k, \$50k, \$100k, \$250k	ın reasonable wo	orst case	Event Cost Score Risk Subtotal	130	=
						MISK SUBLUIGH	130	

2995000003672014

KLONDIKE HIGHWAY



