

M:\proj\Lennie\Saddle East 11-6\summaries\100% 200(3) grading sum-08-2015.xlsm\Summary

GRADING SUMMARY																	STATE	SADDLE ROAD	SHEET	TOTAL
																		PROJECT	NO.	SHEETS
																	HI	HI SR 200(3)	C5	C15
Item Number		Roadway Excavation					Adj to Exc				Roadway Embankment									
Station to Station		Roadway Prism	Approach Roads	6" Over Excavation for Pavement Section in Cuts	20401-0000	20402-0000	(-) Suitable Material	Average Shrink / Swell Factor	Total Excavation Available for Fills	Total Excavation (Ash)	Roadway Prism	Approach Roads	(+) Replace 6" Over Excavation for Pavement Section in Cuts	Embankment Construction	(-) Replace Sub-Excavation ⁴	20441-0000	Mass Ordinate	20441-0000		
						Sub-excavation										(-) Waste Disposal on Embankment Slope (Ash)				
Definition		(BCY)	(BCY)	(BCY)	(BCY)	(BCY)	(BCY)		(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(BCY)	(CCY)	(CCY)		
154400	-	155900	90055	6	1321	91381	0	0	0.95	86812	0	617	103	1321	2042	0	0	84771	84771	
155900	-	157300	13325	0	789	14114	0	0	0.95	13408	0	36474	0	789	37262	0	0	60917	-23854	
157300	-	158700	62571	92	1127	63791	0	0	0.95	60601	0	3081	74	1127	4282	0	0	117236	56319	
158700	-	160100	28781	0	1396	30177	0	0	0.95	28668	0	1	0	1396	1397	0	0	144507	27272	
160100	-	161500	16606	670	1170	18446	0	0	0.95	17524	0	1698	0	1170	2868	0	0	159162	14655	
161500	-	162900	4635	0	383	5018	0	0	0.95	4767	0	25275	0	383	25658	0	0	138271	-20891	
162900	-	164300	14009	0	811	14821	0	0	0.95	14080	0	6087	0	811	6899	0	0	145452	7181	
164300	-	165700	33905	200	914	35019	0	0	0.95	33268	0	9675	54	914	10644	0	0	168077	22624	
165700	-	167100	9916	0	724	10639	0	0	0.95	10107	0	13890	0	724	14614	0	0	163570	-4506	
167100	-	168500	71172	2531	1396	75099	0	0	0.95	71344	0	4	4	1396	1404	0	0	233511	69941	
168500	-	169900	11328	0	500	11829	0	0	0.95	11237	0	39693	0	500	40193	0	0	204555	-28956	
169900	-	171300	17843	1660	1676	21179	0	0	0.95	20120	0	2206	4076	1676	7957	0	0	216718	12163	
171300	-	172900	131063	54	1515	132633	0	0	0.95	126001	0	1721	131	1515	3368	0	0	339351	122633	
172900	-	174100	2269	0	0	2269	11428	0		0	13697	19423	0	0	19423	11428	14449	308500	-30851	
174100	-	175500	4240	85	0	4325	7917	1268	0.95	1205	10952	10457	6	0	10462	7917	8244	291325	-17175	
175500	-	176900	21857	0	0	21857	1377	14798	0.95	14058	9176	4901	0	0	4901	1377	4419	299105	7780	
176900	-	178300	11288	0	0	11288	12511	11135	0.95	10578	13221	23108	0	0	23108	12511	13420	274065	-25041	
178300	-	179550	265	164	0	429	14439	0		0	14704	47565	3905	0	51470	14439	24725	208156	-65909	
179550	-	180850	83145	1097	0	84242	7000	16565	0.95	15737	74408	2032	0	0	2032	7000	1441	214861	6705	
180850	-	182250	1213	162	0	1375	3501	0		0	4714	26306	830	0	27136	3501	20853	184224	-30637	
182250	-	183650	1206	4	0	1210	1474	0		0	2680	52144	51	0	52194	1474	29883	130555	-53669	
183650	-	185050	12092	123	0	12215	5028	1825	0.95	1734	15385	43020	0	0	43020	5028	23908	84242	-46313	
185050	-	186100	3003	269	0	3272	2666	0		0	5669	22558	9411	0	31970	2666	1218	49606	-34636	
Totals			645787	7117	13722	666628	67341	45591		541249	164606	391936	18645	13722	424304	67341	142560		49606	
THE SHRINK/SWELL FACTORS ARE GENERIC, BASELINE ASSUMPTIONS MADE SOLELY FOR DESIGN PURPOSES. THE GOVERNMENT IS MAKING NO EXPRESS OR IMPLICIT REPRESENTATIONS AS TO SHRINK/SWELL FACTORS OR OTHER SUBSURFACE PHYSICAL CONDITIONS ON THE PROJECT. ACTUAL SHRINK/SWELL FACTORS SHOULD BE EXPECTED TO VARY SIGNIFICANTLY DUE TO THE HIGH VARIABLE GEOLOGY OF LAVA FLOWS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY INCREASED COSTS RESULTING FROM ACTUAL SUBSURFACE CONDITIONS ENCOUNTERED WHICH DIFFER FROM ANY SUCH CONDITIONS IT MAY HAVE ANTICIPATED IN ITS BID. IT IS ANTICIPATED THAT ONE OF MORE DESIGN ADJUSTMENTS WILL BE NEEDED TO BALANCE THE EARTHWORK. SEE SECTION 204 OF THE SPECIAL CONTRACT REQUIREMENTS FOR DESIGN ADJUSTMENT PROCEDURES AND METHODS OF MEASUREMENT AND PAYMENT.																				
THE SHRINK/SWELL FACTORS ARE NOT INTENDED AND SHOULD NOT BE USED TO ESTIMATE VOLUMES OF SUBSURFACE MATERIAL TYPES, INCLUDING A'A CINDER, PAHOEHOE, HARD BASALT, VOLCANIC ASH, OR TOPSOIL, ALL OF WHICH CAN BE EXPECTED TO BE ENCOUNTERED. THE GOVERNMENT HAS NOT ATTEMPTED TO ESTIMATE THE VOLUMES OR DIFFICULTY OF EXCAVATION, HANDLING, PROCESSING AND PLACEMENT FOR THE VARIOUS MATERIAL TYPES. THE GEOTECHNICAL DATA REPORT (GDR), INCLUDING BORING LOGS, WILL BE PROVIDED UPON REQUEST, SOLELY FOR THE PURPOSE OF SHARING SUBSURFACE INFORMATION OBTAINED BY THE GOVERNMENT. THE LATERAL CONTINUITY OF BORING LOG DATA PROVIDED IN THE GDR IS UNKNOWN. THE GDR IS NOT INTENDED TO DEPICT THE ESTIMATED VOLUMES OF SUBSURFACE MATERIAL TYPES, INCLUDING A'A CINDER, PAHOEHOE, HARD BASALT, VOLCANIC ASH, OR TOPSOIL, ALL OF WHICH CAN BE EXPECTED TO BE ENCOUNTERED. THE CONTRACTOR IS FULLY RESPONSIBLE FO RANY INTERPRETATION OF THE GDR BEYOND THE SPECIFIC INFORMATION PROVIDED THEREIN.																				
NOTES:																		BRUCE K. MEYERS Licensed Professional Engineer No.8336-C HAWAII, U.S.A. This work was prepared by me or under my supervision and construction to this project will be under my observation  Expiration Date of License 04/30/16		
1. BCY = Bank Cubic Yard = One cubic yard of material as it lies in natural bank state.																				
2. CCY = Compacted Cubic Yard = One cubic yard of material after it has been compacted to specification density.																				
3. The quantities shown herein are approximations. Payment will be made for the actual quantities of work performed and accepted.																				
4. Incidental to 20402-000x Subexcavation.																				
5. The average shrink/swell factor shown is computed by taking an average of values over the specified station range. Recommended shrink/swell factors are used in the calculations. See Geotech Report for recommended shrink/swell values.																				
6. The above Grading Summary is based on generic shrink/swell factors and does not include all minor quantities and adjustments, therefore, it is not an exact representation of the earthwork to be constructed.																				