

M:\Wpro\JLennie\208009H\summaries\100% 200(2) grading sum A.xls\Summary A

SCHEDULE A GRADING SUMMARY														STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
														HI	HI HP & TI 200(2)	C10	C24
Pay Item			Roadway Excavation				Adj to Exc	Roadway Embankment				Mass Haul					
			20401-0000					20420-0000									
Station to Station			Roadway Prism	Approach Roads	(+) 6" Over Excavation for Pavement Section in Cuts	Roadway Excavation	Average Shrink/Swell Factor	Total Excavation Available for Fills	Roadway Prism	Approach Roads	(+) Replace 6" Over Excavation for Pavement Section in Cuts	Embankment Construction	Excavation - Embankment	Mass Ordinate	Waste		
Definition			(BCY) ⁽¹⁾	(BCY)	(BCY)	(BCY)		(CCY) ⁽²⁾	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(BCY)		
116000	-	117400	14835	63	1276	16174	0.75	12130	6454	4	1276	7734	4397	4397	4397		
117400	-	118550	3834	38	650	4522	0.75	3392	10516	248	650	11414	-8022	-3626	-8022		
118550	-	118800	11635	0	241	11876	1.00	11876	0	0	241	241	11635	8009	11635		
118800	-	120200	12407	0	578	12985	1.00	12985	18727	0	578	19305	-6320	1689	-6320		
120200	-	121600	22177	0	1156	23333	1.00	23333	2699	0	1156	3855	19478	21167	19478		
121600	-	123000	14454	0	554	15008	1.00	15008	39106	0	554	39660	-24652	-3485	-24652		
123000	-	124400	763	85	193	1041	1.00	1041	7359	0	193	7552	-6511	-9996	-6511		
124400	-	125800	5394	0	1011	6405	1.00	6405	3089	0	1011	4100	2305	-7691	2305		
125800	-	127200	50	24	0	74	1.00	74	25569	128	0	25697	-25623	-33314	-25623		
127200	-	128600	4044	0	698	4742	1.00	4742	15878	0	698	16576	-11834	-45148	-11834		
128600	-	130000	3723	0	337	4060	1.00	4060	6289	0	337	6626	-2566	-47714	-2566		
130000	-	131400	48878	4076	1348	54302	1.00	54302	28	11	1348	1387	52915	5201	52915		
131400	-	132800	9238	0	361	9599	1.00	9599	7482	0	361	7843	1756	6957	1756		
132800	-	133600	1917	0	554	2471	1.00	2471	2240	0	554	2794	-323	6634	-323		
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BRUCE E. MEYER

Licensed Professional Engineer

No. 8336-C

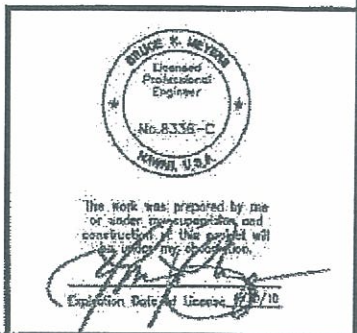
ARIZONA, U.S.A.

The work was prepared by me or under my supervision and construction of this project will be in accordance with the provisions of the Arizona Engineering Act.

Expiration Date of License: 12/31/18

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SCHEDULE B GRADING SUMMARY													STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
													HI	HI HP & TI 200(2)	C11	C24
Pay Item			Roadway Excavation				Adj to Exc	Roadway Embankment				Mass Haul				
					(+)	20401-0000				(+)	20420-0000					
Station to Station			Roadway Prism	Approach Roads	Excavation for Pavement Section in Cuts ⁽⁴⁾	Roadway Excavation	Average Shrink/Swell Factor	Total Excavation Available for Fills	Roadway Prism	Approach Roads	Replace 6" Over Excavation for Pavement Section in Cuts ⁽⁴⁾	Embankment Construction	Excavation - Embankment	Mass Ordinate	Waste	
Definition			(BCY) ⁽¹⁾	(BCY)	(BCY)			(CCY) ⁽²⁾	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(BCY)	
116000	-	117400	14835	63	1276	16174	0.75	12130	6454	4	1276	7734	4397	4397	4397	
117400	-	118550	3834	38	650	4522	0.75	3392	10516	248	650	11414	-8022	-3626	-8022	
118550	-	118800	11635	0	241	11876	1.00	11876	0	0	241	241	11635	8009	11635	
118800	-	120200	12407	0	578	12985	1.00	12985	18727	0	578	19305	-6320	1689	-6320	
120200	-	121600	22177	0	1156	23333	1.00	23333	2699	0	1156	3855	19478	21167	19478	
121600	-	123000	14454	0	554	15008	1.00	15008	39106	0	554	39660	-24652	-3485	-24652	
123000	-	124400	763	85	193	1041	1.00	1041	7359	0	193	7552	-6511	-9996	-6511	
124400	-	125800	5394	0	1011	6405	1.00	6405	3089	0	1011	4100	2305	-7691	2305	
125800	-	127200	50	24	0	74	1.00	74	25569	128	0	25697	-25623	-33314	-25623	
127200	-	128600	4044	0	698	4742	1.00	4742	15878	0	698	16576	-11834	-45148	-11834	
128600	-	130000	3723	0	337	4060	1.00	4060	6289	0	337	6626	-2566	-47714	-2566	
130000	-	131400	48878	4076	1348	54302	1.00	54302	28	11	1348	1387	52915	5201	52915	
131400	-	132800	9238	0	361	9599	1.00	9599	7481	0	361	7842	1757	6958	1757	
132800	-	134200	31585	0	1131	32716	1.00	32716	2335	0	1131	3466	29250	36208	29250	
134200	-	135600	23317	140	1204	24661	1.00	24661	1511	35	1204	2750	21911	58119	21911	
135600	-	137000	5315	30	674	6019	1.00	6019	4799	169	674	5642	377	58496	377	
137000	-	138400	6183	29	698	6910	1.00	6910	14318	363	698	15379	-8469	50027	-8469	
138400	-	139800	2848	0	457	3305	1.00	3305	9021	0	457	9478	-6173	43854	-6173	
139800	-	141200	4566	29	698	5293	1.00	5293	12595	54	698	13347	-8054	35800	-8054	
141200	-	142600	18372	0	1035	19407	1.00	19407	2451	0	1035	3486	15921	51721	15921	
142600	-	144000	9065	0	650	9715	1.00	9715	12755	0	650	13405	-3690	48031	-3690	
144000	-	145400	209	12	193	414	1.00	414	39186	172	193	39551	-39137	8894	-39137	
145400	-	146080	1250	0	24	1274	1.00	1274	2061	0	24	2085	-811	8083	-811	
Totals			254142	4526	15167	273835		268661	244227	1184	15167	260578			8084	



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SCHEDULE C GRADING SUMMARY													STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
													HI	HI HP & TI 200(2)	C12	C24
Pay Item			Roadway Excavation				Adj to Exc	Roadway Embankment				Mass Haul				
						20401-0000					20420-0000					
Station to Station			Roadway Prism	Approach Roads	(+) 6" Over Excavation for Pavement Section in Cuts	Roadway Excavation	Average Shrink/Swell Factor	Total Excavation Available for Fills	Roadway Prism	Approach Roads	(+) Replace 6" Over Excavation for Pavement Section in Cuts	Embankment Construction	Excavation - Embankment	Mass Ordinate	Waste	
Definition			(BCY) ⁽¹⁾	(BCY)	(BCY)	(BCY)		(CCY) ⁽²⁾	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(BCY)	
116000	-	117400	14835	63	1276	16174	0.75	12130	6454	4	1276	7734	4397	4397	4397	
117400	-	118550	3834	38	650	4522	0.75	3392	10516	248	650	11414	-8022	-3626	-8022	
118550	-	118800	11635	0	241	11876	1.00	11876	0	0	241	241	11635	8009	11635	
118800	-	120200	12407	0	578	12985	1.00	12985	18727	0	578	19305	-6320	1689	-6320	
120200	-	121600	22177	0	1156	23333	1.00	23333	2699	0	1156	3855	19478	21167	19478	
121600	-	123000	14454	0	554	15008	1.00	15008	39106	0	554	39660	-24652	-3485	-24652	
123000	-	124400	763	85	193	1041	1.00	1041	7359	0	193	7552	-6511	-9996	-6511	
124400	-	125800	5394	0	1011	6405	1.00	6405	3089	0	1011	4100	2305	-7691	2305	
125800	-	127200	50	24	0	74	1.00	74	25569	128	0	25697	-25623	-33314	-25623	
127200	-	128600	4044	0	698	4742	1.00	4742	15878	0	698	16576	-11834	-45148	-11834	
128600	-	130000	3723	0	337	4060	1.00	4060	6289	0	337	6626	-2566	-47714	-2566	
130000	-	131400	48878	4076	1348	54302	1.00	54302	28	11	1348	1387	52915	5201	52915	
131400	-	132800	9238	0	361	9599	1.00	9599	7481	0	361	7842	1757	6958	1757	
132800	-	134200	31585	0	1131	32716	1.00	32716	2335	0	1131	3466	29250	36208	29250	
134200	-	135600	23317	140	1204	24661	1.00	24661	1511	35	1204	2750	21911	58119	21911	
135600	-	137000	5315	30	674	6019	1.00	6019	4799	169	674	5642	377	58496	377	
137000	-	138400	6183	29	698	6910	1.00	6910	14318	363	698	15379	-8469	50027	-8469	
138400	-	139800	2848	0	457	3305	1.00	3305	9021	0	457	9478	-6173	43854	-6173	
139800	-	141200	4566	29	698	5293	1.00	5293	12595	54	698	13347	-8054	35800	-8054	
141200	-	142600	18372	0	1035	19407	1.00	19407	2451	0	1035	3486	15921	51721	15921	
142600	-	144000	9065	0	650	9715	1.00	9715	12755	0	650	13405	-3690	48031	-3690	
144000	-	145400	185	12	48	245	1.00	245	43609	172	48	43829	-43584	4447	-43584	
145400	-	146800	46348	0	794	47142	1.00	47142	16831	0	794	17625	29517	33964	29517	
146800	-	148200	4362	16	530	4908	1.00	4908	8183	44	530	8757	-3849	30115	-3849	
148200	-	149600	24641	2	891	25534	1.00	25534	24735	1769	891	27395	-1861	28254	-1861	
149600	-	151000	17055	0	506	17561	1.00	17561	66235	0	506	66741	-49180	-20926	-49180	
151000	-	152400	37435	0	1083	38518	1.00	38518	8113	0	1083	9196	29322	8396	29322	
152400	-	153800	9070	11	915	9996	1.00	9996	12402	73	915	13390	-3394	5002	-3394	
153800	-	155200	4076	27	0	4103	1.00	4103	6046	63	0	6109	-2006	2996	-2006	
155200	-	155400	824	35	0	859	1.00	859	6	16	0	22	837	3833	837	
Totals			396679	4617	19717	421013		415839	389140	3149	19717	412006			3834	

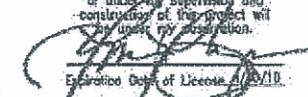
BRUCE K. MEYERS

Licensed Professional Engineer

No. 6336-C

MOBILE, U.S.A.

The work was prepared by me or under my supervision and control and I am a duly Licensed Professional Engineer at the time of preparation of this report.



Expiration Date of License: 1/1/2010



The work was prepared by me or under my supervision and control of the project will be under my jurisdiction.

Expiration Date of License: 4/30/10

SCHEDULE C GRADING SUMMARY

Station to Station		Excavation (BCY)					Embankment (CCY)				
		Roadway Prism (BCY)	Appr. Roads (BCY)	Subexc Cuts (BCY)	Import, Oblit Mat'l (BCY)	Total Exc. (CCY)	Roadway Prism (CCY)	Appr. Roads (CCY)	Replace Subexc (CCY)	Fill Lava Tubes (CCY)	Total Emb. (CCY)
Definition											
116000	117400	17960.9	63	1196.8	2445	21665.7	6115.1	4	1196.8	0	7315.9
117400	118550	3513.8	38	473.3	435	4460.1	10271.5	248	473.3	37	11029.8
118550	118800	11468.9	0	241	0	11709.9	0	0	241	0	241
118800	120200	12363.2	0	560.9	75	12999.1	19632.4	0	560.9	73	20266.3
120200	121600	21867.5	0	1079.5	0	22947	2646	0	1079.5	518.1	4243.6
121600	123000	13671.6	0	493.7	615	14780.3	39627.2	0	493.7	74	40194.9
123000	124400	1286.1	85	368.8	0	1739.9	7611.3	0	368.8	3	7983.1
124400	125800	5016.5	0	813.4	675	6504.9	3242.5	0	813.4	0	4055.9
125800	127200	10.2	24	16.2	0	50.4	26751.5	128	16.2	41	26936.7
127200	128600	3596.3	0	644.6	0	4240.9	15409.2	0	644.6	0	16053.8
128600	130000	4378.4	0	392.4	0	4770.8	6311.4	0	392.4	0	6703.8
130000	131400	53325.2	2765	1479	0	57569.2	4	2	1479	0	1485
131400	132800	6096.9	0	399.4	495	6991.3	8425	0	399.4	0	8824.4
132800	134200	32523	0	1201	0	33724	1693.2	0	1201	37	2931.2
134200	135600	21502.7	140	1041.6	0	22684.3	1605.6	35	1041.6	147	2829.2
135600	137000	6674.4	30	698.5	870	8272.9	5435.1	169	698.5	680.3	6982.9
137000	138400	4860	29	534.4	0	5423.4	15033.4	363	534.4	55	15985.8
138400	139800	2874.4	0	393.1	570	3837.5	9194.8	0	393.1	0	9587.9
139800	141200	4429.3	29	544.7	510	5513	13496.2	54	544.7	0	14094.9
141200	142600	18702.7	0	1041.5	0	19744.2	2587.1	0	1041.5	268	3896.6
142600	144000	12328	0	817.8	405	13550.8	7310.3	0	817.8	835.7	8963.8
144000	145400	1481.7	12	253.2	0	1746.9	27388	172	253.2	73	27886.2
145400	146800	48209.7	0	843	690	49742.7	10905.2	0	843	0	11748.2
146800	148200	2383.9	16	385.3	555	3340.2	9986.4	44	385.3	0	10415.7
148200	149600	24103.6	9.9	744.5	0	24858	24171.8	936.4	744.5	73	25925.7
149600	151000	18932.1	0	537.9	0	19470	50774.6	0	537.9	0	51312.5
151000	152400	35131.3	0	1076.8	240	36448.1	9618.9	0	1076.8	37	10732.7
152400	153800	10091.6	11	913.2	0	11015.8	8322.2	73	913.2	129	9437.4
153800	155200	6020.5	27	317.9	660	7025.4	6735.3	63	317.9	24.6	7140.8
155200	155400	578.3	0	96	0	674.3	22.7	0	96	0	118.7
Totals		405382.7	3278.9	19599.4	9240	437501	350327.9	2291.4	19599.4	3105.7	375324.4

Note: Volumes above are corrected for roadway curvature

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GRADING SUMMARY NOTES											REVISED 07/14/09	STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
											AMENDMENT A002	HI	HI HP & TI 200(2)	C13	C24
Pay Item	Roadway Excavation				Adj to Exc		Roadway Embankment				Mass Haul				
				20401-0000						20420-0000					
Station to Station	Roadway Prism	Approach Roads	(+) 6" Over Excavation for Pavement Section in Cuts	Roadway Excavation	Average Shrink/Swell Factor	Total Excavation Available for Fills	Roadway Prism	Approach Roads	(+) Replace 6" Over Excavation for Pavement Section in Cuts	Embankment Construction	Excavation - Embankment	Mass Ordinate	Waste		
Definition	(BCY) ⁽¹⁾	(BCY)	(BCY)	(BCY)		(CCY) ⁽²⁾	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(CCY)	(BCY)	
NOTES: 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. All materials encountered in the earthwork, including volcanic ash and topsoil, will be paid under the roadway excavation and roadway embankment bid items. See Section 204 of the Special Contract Requirements for measurement and payment details. The quantities shown herein are approximate. Payment will be made for the actual quantities of work performed and accepted. 4. The incidence and locations of volcanic ash and topsoil are unknown. Volcanic ash was not indicated in the geotechnical test borings but is known to exist in the general project area. Therefore it is anticipated that some volcanic ash will be encountered in the work. Topsoil will be excavated and conserved only when found in relatively thick deposits or as described in subsection 204.09(a). It is anticipated that the quantities of volcanic ash and topsoil will be relatively small compared to the total roadway excavation and embankment volumes. 5. The grading summary does not include any adjustment for aggregate surface course material which may be imported from an off-site source. 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 HIGHLY 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 OR 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, PA'HOEHOE, 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 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, PA'HOEHOE, HARD BASALT, VOLCANIC ASH, OR TOPSOIL, ALL OF WHICH CAN BE EXPECTED TO BE ENCOUNTERED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY INTERPRETATION OF THE GDR BEYOND THE SPECIFIC INFORMATION PROVIDED THEREIN. RT BRUCE K. METTER Licensed Professional Engineer No. 8336-C HAWAII, U.S.A. The work was prepared by me or under my supervision and construction of this project will be under my supervision. Expiration Date of License 8/30/10															