<i>SOW Reference</i> 3.1 Manufacturing Development Activities 3.1.1 Methods for Fabricating VVSA 3.1.2 Design Changes 3.1.3 Preliminary MIT/AQ for VVSA 3.1.4 Budgetary Cost/Schedule for VVSA	COST		E DETAIL FOR ol and Machin	Tool & Machine, Inc.	
1. Direct Material – Description None required	Quantity 1	Unit Cost -	Units \$/assy	Total Estimated Cost 	Notes No material for these SOW elements
		TOTAL DIREC	CT MATERIAL	_	
	Estimated				
3. Direct Labor	Hours	Avg Rate		Estimated Cost	Notes
Engineering/Program Management	162	32.00		5,196	
	1.62		\$/hr	-	
(Total Direct Labor Hours)	162	ם וגדחד	IRECT LABOR	5,196	
	Estimated	TOTAL DI	RECTLADUR	5,190	
4. Labor Overhead	Hours	Avg Rate			
		J	\$ per direct		
Engineering/Program Management	162	58.00	labor hour	9,417	
		τοτα	L OVERHEAD		
		1017	LOVENILAD	5,417	
5. Subcontract Costs					
			\$/unit	-	
	TOT				
	101/	AL SUBCONT	RACT COSTS	_	
6. Travel	Airfare/Car	Food/Lodgi	ing		
				-	
			DTAL TRAVEL	-	
			TOTAL COST	14,612	
7. Fee	0.075			1,096	
8. Facilities Capital Cost of Money.				0	
· · · · · · · · · · · · · · · · · · ·			Price =>	15,708	]
					-



# SOW Reference

3.2.1 MIT/QA Plans for PVVS

1. Direct Material – Description None required	Quantity 1	Unit Cost Units - \$/assy		Total Estimated Cost -	Notes
		TOTAL DIRE	CT MATERIAL	-	
2. Direct Labor Engineering/Program Management	Estimated Hours 201	Avg Rate 32.00	\$/hr	Estimated Cost 6,432 -	
(Total Direct Labor Hours)	201	TOTAL L	DIRECT LABOR	6,432	-
3. Labor Overhead	Estimated Hours	Avg Rate			
Engineering/Program Management	201	58.00	\$/hr	11,659	
		ΤΟΤ	AL OVERHEAD		-
4. Subcontract Costs					
			\$/unit	- -	
	тот,	AL SUBCON	TRACT COSTS	_	1
. Travel	Airfare/Car	Food/Lodo	iina		
		,		-	
		7	OTAL TRAVEL		-
			TOTAL COST	18,091	
5. Fee	0.075			1,357	
7. Facilities Capital Cost of Money.			Price =>	0	

#### COST AND PRICE DETAIL FOR Q03-00639 Major Tool and Machine, Inc.



#### SOW Reference

3.2.2 PVVS Manufacture (included in line item 3 of MTM's quote Q03-00639) Fabrication of Fixturing

Fabrication of Fixturing						
			Total Estimated			
<ol> <li>Direct Material – Description</li> </ol>	Quantity	Unit Cost Units	Cost		Notes	
Tubing and plate	1	9,868 \$/assy	9,868	9,868		
				0.075		740.10
	TOTAL	DIRECT MATERIAL	9.868	Material w/fee		10,608.10
	Estimated	2	5,000			
2. Direct Labor	Hours	Avg Rate	Estimated Cost			
Fabrication	178	20.00 \$/hr	3,564			
Machine Hours: 30' Mitsu	50	20.00	1,000			
Machine Hours: Small 5 axis	150	20.00	3,000			
CMM Inspection	55	22.00	1,210			
Deburr	10	15.00	150			
Burnout	7	20.00	140			
Saws	5	16.00	80			
Final Inspection	20	17.00	340			
i mai mopeetion	20	11100	<u><u> </u></u>			
(Total Direct Labor H						
		TAL DIRECT LABOR	9,484			
	Estimated	A Data				
3. Labor Overhead	Hours	Avg Rate	12 472			
Fabrication	178	70.00 \$/hr	12,473			
Machine Hours: 30' Mitsu	50	100.00	5,000			
Machine Hours: Small 5 axis	150	80.00	12,000			
CMM Inspection	55	103.00	5,665			
Deburr	10	59.00	590			
Burnout	7	73.00	511			
Saws	5	59.00	295			
Final Inspection	20	63.00	1,260			
		TOTAL OVERHEAD	37,794			
4. Subcontract Costs						
		\$/unit	_			
		¢, unit	-			
	TOTAL SUB	CONTRACT COSTS				
5. Travel		Food/Lodging				
			-			
		TOTAL TRAVEL	-			
		TOTAL COST				
6. Fee	0.075		4,286			
7. Facilities Capital Cost of Money.			0			
acintics cupital cost of money.	Г	Price =>	÷			SOW 3
	Ļ	11100 - 2	01,101	l		50W 5

PROPRIETARY INFORMATION



#### SOW Reference

3.2.2 PVVS Manufacture (Included in line item 1 of MTM's quote Q03-00639) Fabrication of PVVS

	<b>a</b>			Total Estimated		
. Direct Material - Description	Quantity	Unit Cost	Units	Cost	Notes	
Includes Inconel plate, tube, and sheet;						
weld wire; flanges; permeability gage	1	16.000	\$/assy	16,000	16,000	
		.,	.,,		0.075	1,200.00
		TOTAL DI	RECT MATERIAL	16,000	Material w/fee	17,200.00
	Estimated					
. Direct Labor	Hours	Avg Rate		Estimated Cost		
Fabrication	399		\$/hr	7,985		
Machine Hours: Large 5axis	10	20.00		200		
Engineering	321	32.00		10,272		
CMM Inspection	15	22.00		330		
Machine Hours: Small 5 axis	4	20.00		80		
Pressing	60	20.00		1,200		
Rolling/Shear	8	20.00		1,200		
Inspection	ہ 20	17.00		340		
Burnout	20 5	20.00		340 100		
	5					
LPI		17.00		119		
Deburr	21	15.00		315		
Saws	1	16.00		16		
Shipping	<u>8</u>	15.00		120		
(Total Direct Labor Hours)	879					
		TOTA	L DIRECT LABOR	21,227		
	Estimated					
. Labor Overhead	Hours	Avg Rate				
Fabrication	399	70.00		27,948		
Machine Hours: Large 5axis	10	228.0		2,280		
Engineering	321	58.0		18,618		
CMM Inspection	15	103.0		1,545		
Machine Hours: Small 5 axis	4	80.00		320		
Rolling/Shear	8	65.00		488		
Inspection	20	63.00		1,260		
Burnout	5	73.00		365		
LPI	7	60.00		420		
Deburr	21	59.00		1,239		
Saws	1	59.00				
Shipping	8	60.00		480		
		TC	TAL OVERHEAD	54,962		
. Subcontract Costs				- ,		
Vacuum Test	1	3500	\$/unit	3,500	vendor quote	
Stress Relief	1	1800		1,800	cost history	
Electropolish	i	000		-	cost history	
Licettopolish			ONTRACT COSTS	5,300		
Terrel	Ainfana (C		MALI LUSIS	5,500		
. Travel	Airfare/Car	Food/Lodging		_		
			TOTAL TRAVEL	-		
			TOTAL COST	97,489		
5. Fee	0.075			7,312		
. Facilities Capital Cost of Money.				0		
			Price =>	104,801		



### SOW Reference

3.2.2 PVVS Manufacture (In line item 2 of Major Tool's quote Q03-00639) Fabrication of dies to form wall panels

(These costs could also be assigned to SOW 5.4 because the government will own this tooling)

<ol> <li>Direct Material – Description Includes Kirksite dies and structural steel</li> </ol>	Quantity 1	Unit Cost Units	Total Estimated Cost 130,000		Notes Material to fabricate five (5) dies to form panels to shape
	7	TOTAL DIRECT MATERIAL	130,000	0.075 Material w/fee	,
	Estimated				
2. Direct Labor	Hours	Avg Rate	Estimated Cost		
Inspection	41	-	655		
Machine Hours: Seramill	700		14,000		
Deburr	35	15.00	525		
Machine Hours: Press	250	22.00	5,500		
Material Burnout	2	20.00	40		
Engineering/Programming	180	32.00	5,760		
(Total Direct Labor Hours)	1208				
		TOTAL DIRECT LABOR	26,480		
	Estimated				
3. Labor Overhead	Hours	Avg Rate			
Inspection	41		2,620		
Machine Hours: Seramill	700		52,500		
Deburr Machine Hours: Press	35		2,100		
	250		17,000		
Material Burnout	2	79.00	158		
Engineering/Programming	180	58.00	10,440		
		TOTAL OVERHEAD	84,818		
4. Subcontract Costs					
		\$/unit	-		
			-		
	ΤΟΤΑ	AL SUBCONTRACT COSTS	-		
5. Travel	Airfare/Car	Food/Lodging			
			-		
		<b>TOTU TO ::</b>	-		
r		TOTAL TRAVEL	-		
L		TOTAL COST	241,298		
6. Fee	0.075		18,097		
7. Facilities Capital Cost of Money.			0		
		Price =>	259,396		

## COST AND PRICE DETAIL FOR Q03-00639 Major Tool and Machine, Inc.



# SOW Reference

3.3 Final Proposal

3.3.1 Final MIT/QA for VVSA

3.3.2 Final Cost/Schedule for VVSA

1. Direct Material – Description None required	Quantity 1	Unit Cost - TOTAL DIRF	Units \$/assy CT MATERIAL	Total Estimated Cost Notes 
2. Direct Labor Engineering	Estimated Hours 77	Avg Rate 32.00	\$/hr	Estimated Cost 2,474
(Total Direct Labor Hours)	77	TOTAL		
	Estimated	TUTALD	IRECT LABOR	2,474
4. Labor Overhead Engineering	Hours 77	Avg Rate	\$/hr	4,484
				-
		ΤΟΤΑ	L OVERHEAD	4,484
5. Subcontract Costs			\$/unit	-
	TOT	AL SUBCONT	RACT COSTS	_
6. Travel	Airfare/Car	Food/Lodg	ing	
				-
		Τí	OTAL TRAVEL	-
			TOTAL COST	
7. Fee	0.075			522
7. 100	0.07		Price =>	
		L	/	
				Μ

# COST AND PRICE DETAIL FOR Q03-00639 Major Tool and Machine, Inc.



# SOW Reference

5.0 Deliverables

5.1 Weekly Reports

5.2 Monthly Earned Value Reports

5.3 Technical Reports

5.4 PVVS

				Total	
1. Direct Material – Description	Quantity	Unit Cost		Estimated Cost Notes	
None required	1	-	\$/assy		
	7	OTAL DIRE	CT MATERIAL	_	
2. Direct Labor	Estimated Hours	Ava Data		Estimated Cost	
Engineering	54	Avg Rate 32.00	¢/br	1,732	
Engineering	54	52.00	5/11	1,752	
(Total Direct Labor Hours)	54			-	
	51	τοται σ	IRECT LABOR	1,732	
	Estimated			.,	
3. Labor Overhead	Hours	Avg Rate			
Engineering	54	58.00	\$/hr	3,139	
				_	
		ΤΟΤΑ	L OVERHEAD	3,139	
4. Subcontract Costs					
			\$/unit	_	
	ΤΟΤΑ	L SUBCONT	RACT COSTS	_	
5. Travel	Airfare/Car	Food/Loda	ina		
	/ in rule / eur	, oou, coug		_	
				_	
		Τι	OTAL TRAVEL		
			TOTAL COST	4,871	
6. Fee	0.075			365	
7. Facilities Capital Cost of Money.				0	
. , , ,			Price =>	5,236	
	·				S
					Mike l

SOW 5.0 Mike Manuel Oct 15th 2003