PALMETTO ASR

Project Number 04-427

History

- The City began the installation of reclaimed water lines as a disposal method for the effluent from the Wastewater Facility. It did not take long to find out that that there was a need to store reclaim water to assure customers would have adequate irrigation water and that there would not be a need to discharge precious water to the bay. This has been a long process beginning in 2004 with the creation of Project 04-427 Aquifer Storage and Recovery Well (ASR) and many meetings and discussions prior to that.

- An agreement was entered into with the Southwest Water Management District for this to be a Cooperative Funding project and it was awarded funding. This year we will be awarded and additional $405,000.

- In 2006 & 2007 an exploratory well was installed and tested to determine the depth and size of the proposed ASR.

- The project was placed on hold by the district because of arsenic issues with other ASR wells throughout the state.

- 2011 some resolutions to the arsenic issues were made and were instructed to proceed by the District

History
[CONTINUED]

- May 2011 - City restarted its ASR program and submitted a plan to address arsenic. City started on the renewal of the ASR Class V Test Well Construction permit and also initiated the design of the ASR system.

- June 2011 - City submitted a Class V Permit renewal to FDEP along with a request for an administrative order.

- July 2011 - ATKINS completed 60% design of the ASR system infrastructure.

- July-December 2011 - Working with Atkins to complete plans to 90% and comment to FDEP Request for Additional Information [RAI] comments.

- Dec 2011 - Completed the 90% engineering design of the ASR well system and submitted to City for their review, responded to RAI #1 from FDEP in regards to the Class V ASR Construction Permit Renewal.
- January 2012 - Prepare 100% engineering design of the ASR well system incorporating final review comments from the City; await further comments (if any) from FDEP on the permit renewal.

- June 5, 2012 - Received final permit and Administrative Order from FDEP.

What's next

- The project is now ready to start.
- We are here today to discuss the method to bring this long awaited project to reality.
- There are two options in order to proceed.
- Conventional low bid approach through our procurement ordinance or;
- Negotiate through our current contract with Veolia for this Capital Improvement Project.

Conventional Approach

Sec. 2-57. - Sealed bids, proposals and quotes.

- (a) *Conditions for use.* Except as provided in sole source procurement, emergency, limited availability procurement, or vendor list procurement, all contracts for the procurement of goods and services costing, in the aggregate, in excess of fifty thousand dollars ($50,000.00) shall be let on the basis of sealed bids, proposals or quotes solicited through formal advertisement in a newspaper of local or area circulation.

Alternative Method

- (c) *Purchases from contracts of other units of government or their suppliers (piggyback method).* The City may purchase equipment, materials and services without issuing an invitation for bids, requests for proposals or other solicitation, if such equipment, materials and services are purchased pursuant to a previously bid or negotiated contract of a supplier with the state or any agency thereof, or any municipality, county or school district of the state, or with the United States General Services Administration.

VEOLIA Contract

Veolia contract provides for additional services that pertain to Capital Projects related to the Wastewater Treatment Facility and Lift Stations. This provision has been used for the last 4-5 years with great savings and time.

The agreement states as follows:

•2.17 – To perform other services and or capital projects that are incidental to the Scope of Services as directed by City. Such services will be invoiced to City at VWNAOS's cost plus fifteen (15%).

•Using the existing contract we can use a CMAR approach

CMAR

Construction Manager At Risk

What distinguishes design-build, CMAR, and design-bid-build delivery?

- The primary differentiator between traditional design-bid-build projects in comparison to design-build or CMAR projects is the involvement of construction personnel early in the project design phase. With a traditional design-bid-build approach, the builder typically has no involvement in the design development. Under design-build or CMAR project delivery, the builder works hand-in-hand with the engineer during the design phase to proactively identify and resolve potential constructability, schedule, and quality issues prior to beginning field work.

- A second important feature of design build delivery that distinguishes it from design-bid-build and CMAR is its single point accountability for both design and construction.

CMAR
[CONTINUED]

- Under the CMAR delivery model, however, the builder works with the engineer during design development even though there are two separate contracts.

- A third distinguishing feature of design build and CMAR project delivery is the opportunity to select the design-builder or CMAR firm based on overall "best value," including the qualifications of the design and construction firms and the key personnel assigned to the project. The term "best value" commonly refers to selection of a service provider based on a comprehensive range of selection criteria, including quality, schedule, risk, and cost factors. In design-bid-build procurements, the designer typically is selected based mainly on qualifications, but often the traditionally bid construction contract must be awarded to the lowest-cost, responsive bidder. Selection based simply on the lowest bid can be appropriate in the purchase of facilities with standard designs, but most water and wastewater projects do not have standard designs. Each is unique and inherently complex both in terms of design and construction.

CMAR
[CONTINUED]

- A fourth distinguishing feature of design build and CMAR is that major equipment procurement and construction typically begin before the design is completed, which increases opportunities to compress the project schedule and potentially take advantage of favorable market conditions.

- Why design-build and CMAR delivery are becoming increasingly popular? Design-build and CMAR, when properly planned and executed, can provide the owner with a number of benefits as compared to design-bid-build for water and wastewater projects. These benefits include:

    - Integration of design and construction.
    - Team responsibility.
    - Value-based selection.
    - Time and cost savings.

CMAR
[CONTINUED]

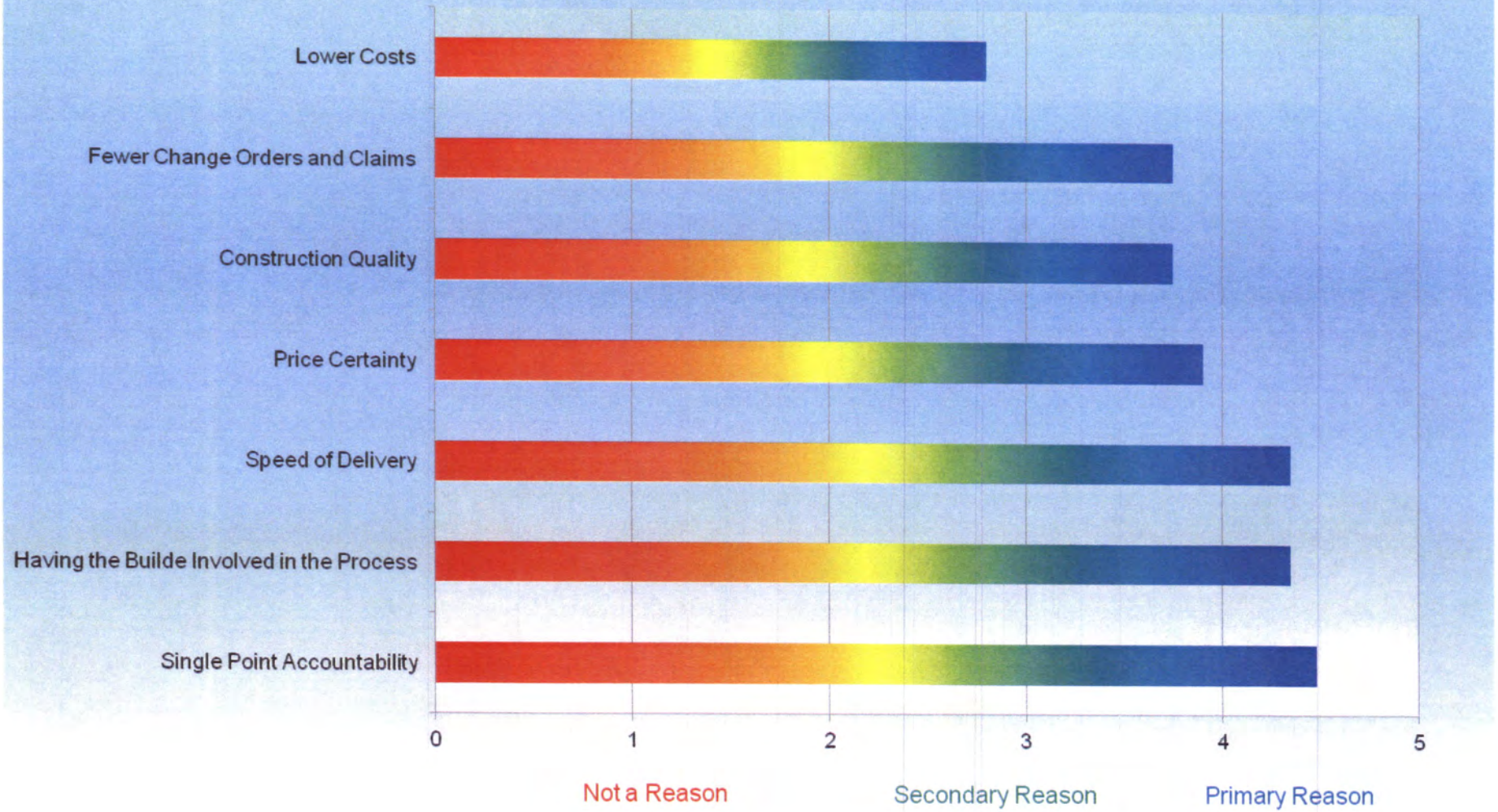
- Early knowledge of total costs.

Why do owners choose design-build?

- The Water Design-Build Council conducted a telephone survey of over 20 municipal owners who opted to use design-build delivery for water and/or wastewater projects. Exhibit I displays their reasons for doing so on a five-point scale where 5 was a primary reason, 3 was a secondary reason, and 1 was not a reason.

- When asked an open-ended question on the most beneficial attributes of design build delivery, respondents identified single-point accountability and speed of delivery more than twice as often as any other attribute. The third most beneficial attribute cited was the ability to choose the design-builder on the basis of criteria other than price only.

EXHIBIT I - Relative Importance Of Reasons for Choosing Design-Build



Staff Recommendation

The Department of Public Works is ready to start this project as well an the District. Over the last few weeks we have been working on the process to complete the project.

We feel that Veolia has been a very responsible and viable partner with the City over these last few years implementing our CIP. We have been looking into cost and processes and feel that entering into an agreement using a modified CMAR approach would be very beneficial to the City for the following reasons:

- That the project will be built faster as we would not use the estimated 60-90 days for procurement.
- Veolia is qualified to under take this project for the City
- We would have an open book as to the actual cost to perform the work as has been proven in the past by receiving the actual invoices from vendors.

Staff Recommendation
[CONTINUED]

- We would know what our Project Administration cost will be from the beginning.
- With Veolia being the operator of the facility the end product will be operational.
- Because their constant involvement with the City and engineer during the design will be an asset to and a perfect fit for CMAR.
- Their continued assistance to our needs dealing with the Wastewater System

To summarize, in the last 3 ½ years since I have returned, Veolia and Ray D'Aiuto have been great partners and I have confidence that by partnering in this project it will be no different.

CITY OF PALMETTO
ENGINEER'S OPINION OF COST
ASR AND MONITOR WELLS
PROJECT NO.

A. MOBILIZATION AND DEMOBILIZATION						
A1	Mobilization and Demobilization	LS	1	$110,000.00	$	110,000.00
SUBTOTAL A -MOBILIZATION/DEMOBILIZATION (Total of Items A1-A1)					**$**	**110,000.00**
B. SODIUM BISULFITE SYSTEM						
B1	Furnish and Install 3900 Gallon Bisulfite Tank	LS	1	$15,000.00	$	15,000.00
B2	Chemical Feed Pump Skid	LS	1	$25,000.00	$	25,000.00
B3	Sodium Bisulfite (catalyzed)	GAL	3,900	$5.00	$	19,500.00
B4	Concrete Slab & Wall Skirt (incl. demo of existing slab)	LS	1	$10,000.00	$	10,000.00
B5	Sodium Bisulfite Piping	LFT	300	$3.75	$	1,125.00
B6	Sample Line Return Piping	LFT	330	$3.75	$	1,237.50
B7	Inline Static Mixer	LS	1	$8,000.00	$	8,000.00
B8	Asphalt Restoration	SFT	428	$35.00	$	14,980.00
SUBTOTAL B -SODIUM BISULFITE FEED SYSTEM (Total of Items B1-B8)					**$**	**94,842.50**
C. WET WELL PUMP STATION						
C1	Wet Well Pump Station Structure (concrete, grating, supports, etc.)	LS	1	$60,000.00	$	60,000.00
C2	Pumps and Controls	EA	3	$100,000.00	$	300,000.00
C3	Floats, Pressure Gauges, ARV, Piping, Fittings, Valves	LS	1	$30,000.00	$	30,000.00
SUBTOTAL C - PUMP STATION (Total of Items C1-C3)					**$**	**390,000.00**
D. ELECTRICAL AND INSTRUMENTATION						
D1	100 HP VFD	EA	1	$25,000.00	$	25,000.00
D2	60 HP VFD	EA	3	$15,000.00	$	45,000.00
D3	480V feed to new ASR (500' - 600A service)	LS	1	$100,000.00	$	100,000.00
D4	Misc. Service Equipment (new bldg breakers) - 600A main installed	LS	1	$20,000.00	$	20,000.00
D5	DFS controls and implementation services	LS	1	$95,000.00	$	95,000.00
D6	F/O Cable (2" conduit) to main control panel	LF	600	$50.00	$	30,000.00
D7	Field connections to 3 - 60 HP Pumps	EA	3	$5,000.00	$	15,000.00
D8	Field connections to 100 HP ASR pump	EA	1	$10,000.00	$	10,000.00
D9	Connection to main control cabinet, meters/ instruments, motor actuators, and devices	EA	20	$2,000.00	$	40,000.00
D10	Feed to 3 - monitor well pumps - 30A circuit - 500' and disconnects (inc. level meters)	LS	1	$20,000.00	$	20,000.00
D11	Connection to 2 - UV Reactors (control panel)	EA	2	$10,000.00	$	20,000.00
D12	Elec. Building (incl.AC, site lighting & wiring)	LS	1	$90,000.00	$	90,000.00
D13	Sample Control Cabinet	LS	1	$15,000.00	$	15,000.00
SUBTOTAL D -ELEC. & INSTRUMENTATION (Total of Items D1-D13)					**$**	**525,000.00**

CITY OF PALMETTO
ENGINEER'S OPINION OF COST
ASR AND MONITOR WELLS
PROJECT NO.

E. UV DISINFECTION SYSTEM						
E1	UV Disinfection System Complete	LS	1	$720,000.00	$	720,000.00
SUBTOTAL E - UV DISINFECTION SYSTEM (Total of Items E1-E1)					**$**	**720,000.00**
F. ASR PUMP, PIPING, FITTINGS, AND VALVES						
F1	ASR Well Head Assembly and Pump	EA	1	$125,000.00	$	125,000.00
F2	Concrete Slab	LS	1	$7,500.00	$	7,500.00
F3	Valve Actuators	EA	5	$7,500.00	$	37,500.00
F4	Mag Meter (8" and 10")	EA	3	$12,000.00	$	36,000.00
F5	DI Piping & Fittings, Pipe Adapters & Supports and Sampling Taps	LS	1	$50,000.00	$	50,000.00
F6	Butterfly Valves (8" and 10")	EA	3	$1,700.00	$	5,100.00
F7	Gate Valve (10")	EA	1	$2,000.00	$	2,000.00
F8	Check Valves (8" and 10")	EA	2	$3,000.00	$	6,000.00
F9	3" Well Service Air Release Valve	EA	1	$3,500.00	$	3,500.00
F10	Level and Water Quality Process Sensors	LS	1	$7,000.00	$	7,000.00
SUBTOTAL F ASR PUMP, PIPING, FITTINGS, AND VALVES (Total of Items F1-F10)					**$**	**279,600.00**
G. SHALLOW MONITOR WELLS DRILLING						
SUBTOTAL G -SHALLOW MONITOR WELLS DRILLING					**$**	**2,000.00**
H. STORAGE ZONE MONITOR WELL DRILLING						
SUBTOTAL H - STORAGE ZONE MONITOR WELL DRILLING					**$**	**150,000.00**
I. ASR WELL DRILLING						
SUBTOTAL I - ASR WELL DRILLING					**$**	**348,000.00**
J. UPPER ZONE MONITOR WELL DRILLING						
SUBTOTAL J - UPPER ZONE MONITOR WELL DRILLING					**$**	**100,000.00**
K. MONITORING WELL PUMPS, PIPING, FITTINGS, AND VALVES						
K1	MW Pumps and Well Heads	EA	3	$6,000.00	$	18,000.00
K2	Concrete Pad	EA	2	$500.00	$	1,000.00
K3	Bollards	EA	12	$500.00	$	6,000.00
K4	Misc. Piping and Fittings	LS	1	$3,000.00	$	3,000.00
K5	Flow Meter	EA	3	$1,000.00	$	3,000.00
K6	Level Sensors	EA	3	$2,500.00	$	7,500.00
K7	Pressure Gauge	EA	6	$500.00	$	3,000.00
SUBTOTAL K MONITORING WELL PUMPS, PIPING, FITTINGS, AND VALVES (Total of Items K1-K7)					**$**	**41,500.00**

CITY OF PALMETTO
ENGINEER'S OPINION OF COST
ASR AND MONITOR WELLS
PROJECT NO.

L. CONNECTION PIPING AND VALVES						
L1	10 inch DIP	LFT	90	$100.00	$	9,000.00
L2	16 inch DIP	LFT	90	$160.00	$	14,400.00
L3	10" Gate Valve and Box	EA	1	$2,500.00	$	2,500.00
L4	16" Gate Valve and Box	EA	1	$7,500.00	$	7,500.00
L5	16" 90 Bend	EA	1	$2,500.00	$	2,500.00
L6	Sidewalk Restoration	SFT	125	$35.00	$	4,375.00
L7	Manhole	EA	1	$4,000.00	$	4,000.00
L8	30" Plug or Cap (DI)	EA	2	$3,000.00	$	6,000.00
L9	30 x 16 Reducer (DI)	EA	1	$4,500.00	$	4,500.00
L10	Sampling line at Effluent Pump Station	LS	1	$1,500.00	$	1,500.00
L11	Existing MH Rehab	LS	1	$2,000.00	$	2,000.00
L12	Pipe and Manhole Abandonment	CYD	1,300	$5.00	$	6,500.00
SUBTOTAL L CONNECTION PIPING AND VALVES (Total of Items L1-L11)					**$**	**64,775.00**

CITY OF PALMETTO
ENGINEER'S OPINION OF COST
ASR AND MONITOR WELLS
PROJECT NO.

SUMMARY OF BID ITEMS		
A. Mobilization and Demobilization	$	110,000.00
B. Sodium Bisulfite System	$	94,842.50
C. Pump Station	$	390,000.00
D. Electrical and Instumentation	$	525,000.00
E. UV Disinfection System	$	720,000.00
F. ASR Pump, Piping, Fittings, and Valves	$	279,600.00
G. Shallow Monitor Wells Drilling	$	2,000.00
H. Storage Zone Monitor Wells Drilling	$	150,000.00
I. ASR Well Drilling	$	348,000.00
J. Upper Zone Monitor Well Drilling	$	100,000.00
K. Monitoring Wells Pumps, Piping, Fittings, and Valves	$	41,500.00
L. Connection Piping and Valves	$	64,775.00
SUBTOTAL ENGINEER'S OPINION OF COST	$	2,825,717.50
M. Project Contingency	$	100,000.00
TOTAL ENGINEER'S OPINION OF COST - ITEMS A-M	$	2,925,717.50

VEOLIA WATER

Master Cost Summary Sheet

PROJECT DATA INPUT

Job No.	Project Name	Location	Revision	Date	JCE Model
TBD	Class V ASR Test Well	Palmetto, FL	Rev. D Draft	07/10/12	V3.0, 5-7-12

PROPOSAL INFORMATION

Project Name:	Class V ASR Test Well
Job Number:	TBD
Location:	Palmetto, FL
Project Manager:	Bill Mayer
Proposal Manager:	Darby Clay
Date:	7/10/2012
Revision:	Rev. D Draft

Master
CPM Job Cost Estimate Model
Version V3.0, 5-7-2012
Password (1111)

MULTIPLIERS

	CONTINGENCY	MARGIN
Construction Subcontractors:	0.0%	9.091%
Engineering Consultants:	0.0%	9.091%
Intercompany Services	0.0%	9.091%
Material & Equipment:	0.0%	9.091%
Labor	0.0%	0.000%
Travel and Living	0.0%	0.000%
Taxes Bonds Other	0.0%	0.000%
Site Costs	0.0%	0.000%
TOTAL:	$ 146,000	$ 285,572

Sell Price $ 3,501,376
Margin $ 285,572

Calc'd Gross Margin: **8.16%**

1.0 - CONSTRUCTION SERVICES

	Description	Direct Cost	Contingency	Margin	Total	% of Sell
28	**Installation Subcontractors**					
	Demolition	$ -	$ -	$ -	$ -	0.0%
	Architectural	$ -	$ -	$ -	$ -	0.0%
	Buildings	$ -	$ -	$ -	$ -	0.0%
	General Contractor	$ -	$ -	$ -	$ -	0.0%
	Structural/Concrete	$ -	$ -	$ -	$ -	0.0%
	Electrical	$ 546,265	$ -	$ 54,627	$ 600,892	17.2%
	Civil/Earthwork	$ -	$ -	$ -	$ -	0.0%
	Mechanical/Process	$ 1,655,149	$ -	$ 165,515	$ 1,820,664	52.0%
	Mechanical/HVAC	$ -	$ -	$ -	$ -	0.0%
	Site Security	$ -	$ -	$ -	$ -	0.0%
	Fencing/Landscaping	$ -	$ -	$ -	$ -	0.0%
	Instrumentation/Programming	$ -	$ -	$ -	$ -	0.0%
	Underground Utilities	$ -	$ -	$ -	$ -	0.0%
	Utilities	$ -	$ -	$ -	$ -	0.0%
	Field Erected Tanks	$ -	$ -	$ -	$ -	0.0%
	Installation Other	$ 624,303	$ -	$ 62,430	$ 686,733	19.6%
	SUBTOTAL:	$ 2,825,718	$ -	$ 282,572	$ 3,108,289	88.8%
	CALC'ED MARGIN:	9.09%				

1.1 - PROFESSIONAL SERVICES

29	**Engineering Services**					
	Engineering Consultants	$ 10,000	$ -	$ 1,000.00	$ 11,000	0.3%
	Engineering Design	$ -	$ -	$ -	$ -	0.0%
	Engineering General	$ -	$ -	$ -	$ -	0.0%
	Engineering Labor	$ -	$ -	$ -	$ -	0.0%
	Scheduling Services	$ -	$ -	$ -	$ -	0.0%
	Surveying Services	$ 10,000	$ -	$ 1,000	$ 11,000	0.3%
	Testing Services	$ -	$ -	$ -	$ -	0.0%
	Geotech Services	$ 10,000	$ -	$ 1,000	$ 11,000	0.3%
	Start-up Services	$ -	$ -	$ -	$ -	0.0%
	Engineering Other	$ -	$ -	$ -	$ -	0.0%
	SUBTOTAL:	$ 30,000	$ -	$ 3,000	$ 33,000	0.9%
	CALC'ED MARGIN:	9.09%				

2.0 - MATERIAL & EQUIPMENT

	Description	Direct Cost	Contingency	Margin	Total	% of Sell
40	**Materials**					
	Mechanical	$ -	$ -	$ -	$ -	0.0%
	Electrical	$ -	$ -	$ -	$ -	0.0%
	Materials Other	$ -	$ -	$ -	$ -	0.0%
41	**Equipment**					
	Mechanical	$ -	$ -	$ -	$ -	0.0%
	Electrical	$ -	$ -	$ -	$ -	0.0%
	Equipment Pumps	$ -	$ -	$ -	$ -	0.0%
	Instrumentation	$ -	$ -	$ -	$ -	0.0%
	Equipment Other	$ -	$ -	$ -	$ -	0.0%
	SUBTOTAL:	$ -	$ -	$ -	$ -	0.0%
	CALC'ED MARGIN:	-				

3.0 - LABOR

	Description	Direct Cost	Contingency	Margin	Total	% of Sell
21	Wages Allocated	$ 83,543	$ -	$ -	$ 83,543	2.4%
21	Applied Overhead Costs	$ 27,947	$ -	$ -	$ 27,947	0.8%
22	Wages & Fringe Ben. Allocat.	$ 15,560	$ -	$ -	$ 15,560	0.4%
-	Operations Resource	$ -	$ -	$ -	$ -	0.0%
	SUBTOTAL:	$ 127,050	$ -	$ -	$ 127,050	3.6%
	CALC'ED MARGIN:	0.00%				

4.0 - TRAVEL & LIVING / CONCUR

	Description	Direct Cost	Contingency	Margin	Total	% of Sell
24	Travel & Living	$ 5,646	$ -	$ -	$ 5,646	0.2%
26/27/34	Travel & Living Other	$ -	$ -	$ -	$ -	0.0%
	SUBTOTAL:	$ 5,646	$ -	$ -	$ 5,646	0.2%
	CALC'ED MARGIN:	0.00%				

4.1 - (CM) TRAVEL & LIVING / CONCUR

	Description	Direct Cost	Contingency	Margin	Total	% of Sell
24	Travel & Living	$ 6,000	$ -	$ -	$ 6,000	0.2%
26/27/34	Travel & Living Other	$ 3,250	$ -	$ -	$ 3,250	0.1%
	SUBTOTAL:	$ 9,250	$ -	$ -	$ 9,250	0.3%
	CALC'ED MARGIN:	0.00%				

5.0 - TAXES-BONDS-OTHER

	Description	Direct Cost	Contingency	Margin	Total	% of Sell
27	License/Permit Fees	$ -	$ -	$ -	$ -	0.0%
32	Surety Bonds	$ -	$ -	$ -	$ -	0.0%
32	Corporate Guarantee	$ -	$ -	$ -	$ -	0.0%
32	Bid Bonds	$ -	$ -	$ -	$ -	0.0%
33	Builders Risk Insurance	$ 30,000.00	$ -	$ -	$ 30,000	0.9%
43	General Liability Insurance	$ 32,640.00	$ -	$ -	$ 32,640	0.9%
44	Sales & Use Tax	$ -	$ -	$ -	$ -	0.0%
-	Project Development Costs	$ 6,500.00	$ -	$ -	$ 6,500	0.2%
	Project Contingency (Hard Code Value)	$ -	$ 146,000.00	$ -	$ 146,000	4.2%
	SUBTOTAL:	$ 69,140	$ 146,000	$ -	$ 215,140	$ - 6.1%
	CALC'ED MARGIN:	0.00%				

6.0 - SITE COSTS

	Description	Direct Cost	Contingency	Margin	Total	% of Sell
26/27/28/34/35/39/41	General Site Costs	$ 3,000	$ -	$ -	$ 3,000	0.1%
-	CM Living Expenses	$ -	$ -	$ -	$ -	0.0%
25	Fleet Vehicle	$ -	$ -	$ -	$ -	0.0%
35/36	Start-up Costs	$ -	$ -	$ -	$ -	0.0%
	SUBTOTAL:	$ 3,000	$ -	$ -	$ 3,000	0.1%
	CALC'ED MARGIN:	0.00%				

TOTALS

Cost	Contingency	Gross Margin	Sell	
$ 3,069,803.94	$ 146,000.00	$ 285,571.75	$ 3,501,375.69	100.0%

Gross Margin 8.16%

Cost Verification True

END OF SHEET