

Thu 24 Apr 2003
Eff. Date 04/25/03

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT NAPAS2: Napa Salt Marsh - Napa Salt Marsh Restoration
Napa Salt Marsh Restoration

TIME 16:05:16
TITLE PAGE 1

Napa Salt Marsh
Napa Salt Marsh Restoration
Sonoma County, California
Alternative Six

Designed By: PWA/B&C/CDM/GAIA
Estimated By: York So/ Joe Viola

Prepared By: QC: Philip Pang

Preparation Date: 04/25/03
Effective Date of Pricing: 04/25/03

Sales Tax: 8.2%

This report is not copyrighted, but the information
contained herein is For Official Use Only.

M C A C E S f o r W i n d o w s
Software Copyright (c) 1985-1997
by Building Systems Design, Inc.
Release 1.2

Thu 24 Apr 2003
Eff. Date 04/25/03

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT NAPAS2: Napa Salt Marsh - Napa Salt Marsh Restoration
Napa Salt Marsh Restoration

TIME 16:05:16

SUMMARY PAGE 1

** PROJECT OWNER SUMMARY - FEATURE **

	QUANTY	UOM	CONTRACT	CONTRNGCY	ESCALATN	TOTAL	CST	UNIT
01	Lands and Damages	1.00	10500000	0	138,335	10638335	10638335	
02	Relocations	1.00	914,308	182,862	14,482	1,111,652	1111652	
06	Habitat Restoration	1.00	77052991	998,001	881,789	78932781	78932781	
14	Recreation	1.00	2,385,550	238,555	34,609	2,658,715	2658715	
30	Planning, Engineering and Design	1.00	7,900,000	0	104,081	8,004,081	8004081	
31	Construction Management	1.00	8,361,332	0	110,159	8,471,491	8471491	

TOTAL	Napa Salt Marsh	1.00 EA	107114181	1,419,418	1,283,456	109817055	109817055	*****

Thu 24 Apr 2003
 Eff. Date 04/25/03

Tri-Service Automated Cost Engineering System (TRACES)
 PROJECT NAPAS2: Napa Salt Marsh - Napa Salt Marsh Restoration
 Napa Salt Marsh Restoration
 ** PROJECT OWNER SUMMARY - SUB-FEAT **

TIME 16:05:16

SUMMARY PAGE 2

		QUANTY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL	CST	UNIT

01	Lands and Damages								
01.23	Constructn Contract(s) Documnts	1.00	EA	10500000	0	138,335	1063833510638335		
01.28	Constructn Contract(s) Documnts								
	TOTAL Lands and Damages	1.00		10500000	0	138,335	1063833510638335		

02	Relocations								
02.03	Utilities & Structures			914,308	182,862	14,482	1,111,652		
	TOTAL Relocations	1.00		914,308	182,862	14,482	1,111,652	1111652	

06	Habitat Restoration								
06.01	Habitat Restoration	1.00	EA	8,367,812	496,668	116,788	8,981,267	8981267	
06.02	Salinity Reduction	1.00	EA	25978394	39,245	342,783	2636042226360422		
06.03	Pipeline	1.00	EA	25530484	0	336,359	2586684325866843		
06.06	Monitoring Costs	1.00		3,696,711	462,089	54,841	4,213,640	4213640	
06.99	Associated General Items	1.00	JB	13479590	0	31,019	1351060913510609		
	TOTAL Habitat Restoration	1.00		77052991	998,001	881,789	7893278178932781		

14	Recreation								
14.01	Pinic ground, wlkway, etc	1.00	EA	2,367,792	236,779	34,352	2,638,923	2638923	
14.02	O&M Costs	1.00	EA	17,758	1,776	257	19,792	19792	
	TOTAL Recreation	1.00		2,385,550	238,555	34,609	2,658,715	2658715	

30	Planning, Engineering and Design								
30.23	Constructn Contracts(s) Documnts	1.00	EA	7,900,000	0	104,081	8,004,081	8004081	
	TOTAL Planning, Engineering and Design	1.00		7,900,000	0	104,081	8,004,081	8004081	

31	Construction Management	1.00		8,361,332	0	110,159	8,471,491	8471491	
	TOTAL Napa Salt Marsh	1.00	EA	107114181	1,419,418	1,283,456	109817055*****		

	QUANTY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL CST	UNIT

01 Lands and Damages							
01.23 Constructn Contract(s) Documnts							
01.23.03			Real Estate Analysis Documents	10500000	0	138,335	10638335

	TOTAL	Constructn Contract(s) Documnts	1.00 EA	10500000	0	138,335	1063833510638335
01.28 Constructn Contract(s) Documnts							

	TOTAL	Lands and Damages	1.00	10500000	0	138,335	1063833510638335
02 Relocations							
02.03 Utilities & Structures							
02.03.01			Site Preparatory work	26,386	5,277	418	32,081
02.03.18			Utilities	887,922	177,584	14,065	1,079,571

	TOTAL	Utilities & Structures		914,308	182,862	14,482	1,111,652

	TOTAL	Relocations	1.00	914,308	182,862	14,482	1,111,652 1111652
06 Habitat Restoration							
06.01 Habitat Restoration							
06.01.00	1.00		Mob and Demob	90,323	18,065	1,428	109,815 109815
06.01.01	1.00		Levee Breaching / Restoration	144,652	0	1,906	146,557 146557
06.01.02	1.00		Ditch Blocks	2,393,015	478,603	37,833	2,909,452 2909452
06.01.03	1.00		levee lowering	664,074	0	8,749	672,823 672823
06.01.04	1.00		Supplemental Levee lowering	299,765	0	3,949	303,714 303714
06.01.05	1.00		Starter Channels w/Berms	4,775,983	0	62,923	4,838,906 4838906

	TOTAL	Habitat Restoration	1.00 EA	8,367,812	496,668	116,788	8,981,267 8981267
06.02 Salinity Reduction							
06.02.00	1.00		mob & demob & Site preparation	196,224	39,245	3,108	238,577 238577
06.02.01	1.00		Initial Levee Repair	1,821,989	0	24,004	1,845,993 1845993
06.02.02	1.00		Rem/Repl pumps, 2ea, 15000 gpm	191,117	0	2,518	193,634 193634
06.02.03	1.00		Install Siphon, Pond 1 to 2	790,549	0	10,415	800,964 800964
06.02.04	1.00		Rep Pond 2 Wtr Contr. Struct	2,692,179	0	35,469	2,727,648 2727648
06.02.05	1.00		Pond 4/5 Wtr Contr. Struct.	11309493	0	149,000	1145849311458493
06.02.06	1.00		Int Lev Bre & Pond 5 Outfall	4,168,295	0	54,916	4,223,211 4223211
06.02.07	1.00		Int NS/P7A, Outfall P8/P8 Ca, MC	4,442,362	0	58,527	4,500,889 4500889

		QUANTITY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL CST	UNIT
06.02.08	Dischge/Mix. Chamber to Napa S	1.00		366,188	0	4,824	371,012	371012
TOTAL Salinity Reduction		1.00	EA	25978394	39,245	342,783	2636042226360422	
06.03 Pipeline								
06.03.01	Napa Pipeline	1.00	EA	7,874,545	0	103,746	7,978,291	7978291
06.03.02	Sonoma Pipeline	1.00	EA	11144024	0	146,820	1129084411290844	
06.03.03	CAC Pipeline	1.00	EA	6,511,915	0	85,793	6,597,708	6597708
TOTAL Pipeline		1.00	EA	25530484	0	336,359	2586684325866843	
06.06 Monitoring Costs								
06.06.01	costs for surveys of Ponds	1.00		3,080,592	462,089	46,724	3,589,404	3589404
06.06.02	Administrative Costs	1.00		616,118	0	8,117	624,236	624236
TOTAL Monitoring Costs		1.00		3,696,711	462,089	54,841	4,213,640	4213640
06.99 Associated General Items								
06.99.01	Construction Overhead			2,354,390	0	31,019	2,385,409	
06.99.05	Adaptive Management			11125200	0	0	11125200	
TOTAL Associated General Items		1.00	JB	13479590	0	31,019	1351060913510609	
TOTAL Habitat Restoration		1.00		77052991	998,001	881,789	7893278178932781	
14 Recreation								
14.01	Pinic ground, wlkway, etc	1.00	EA	2,367,792	236,779	34,352	2,638,923	2638923
14.02	O&M Costs	1.00	EA	17,758	1,776	257	19,792	19792
TOTAL Recreation		1.00		2,385,550	238,555	34,609	2,658,715	2658715
30 Planning, Engineering and Design								
30.23 Constructn Contracts(s) Documnts								
30.23.01	Planning, Engrg and Design	1.00	EA	7,900,000	0	104,081	8,004,081	8004081
TOTAL Constructn Contracts(s) Documnts		1.00	EA	7,900,000	0	104,081	8,004,081	8004081
TOTAL Planning, Engineering and Design		1.00		7,900,000	0	104,081	8,004,081	8004081

Thu 24 Apr 2003
Eff. Date 04/25/03

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT NAPAS2: Napa Salt Marsh - Napa Salt Marsh Restoration
Napa Salt Marsh Restoration

TIME 16:05:16

SUMMARY PAGE 5

** PROJECT OWNER SUMMARY - ELEMENT **

	QUANTITY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL CST	UNIT
31 Construction Management	1.00		8,361,332	0	110,159	8,471,491	8471491
TOTAL Napa Salt Marsh	1.00	EA	107114181	1,419,418	1,283,456	109817055	*****

Tnu 24 Apr 2003
 Eff. Date 04/25/03

Tri-Service Automated Cost Engineering System (TRACES)
 PROJECT NAPAS2: Napa Salt Marsh - Napa Salt Marsh Restoration
 Napa Salt Marsh Restoration
 ** PROJECT OWNER SUMMARY - SPEC-IND **

TIME 16:05:16
 SUMMARY PAGE 6

	QUANTY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL CST	UNIT

01 Lands and Damages							
01.23 Constructn Contract(s) Documnts							
01.23.03 Real Estate Analysis Documents							
01.23.03.03 Real Estate	1.00		10500000	0	138,335	1063833510638335	
TOTAL Real Estate Analysis Documents			10500000	0	138,335	10638335	
TOTAL Constructn Contract(s) Documnts	1.00	EA	10500000	0	138,335	1063833510638335	
01.28 Constructn Contract(s) Documnts							
TOTAL Lands and Damages	1.00		10500000	0	138,335	1063833510638335	

02 Relocations							
02.03 Utilities & Structures							
02.03.01 Site Preparatory work			26,386	5,277	418	32,081	
TOTAL Site Preparatory work			26,386	5,277	418	32,081	
02.03.18 Utilities							
02.03.18.15 Relocate anti undergrd uti.			295,974	59,195	4,688	359,857	
02.03.18.16 Relocate anti high power ln			591,948	118,390	9,376	719,714	
TOTAL Utilities			887,922	177,584	14,065	1,079,571	
TOTAL Utilities & Structures			914,308	182,862	14,482	1,111,652	
TOTAL Relocations	1.00		914,308	182,862	14,482	1,111,652	1111652

06 Habitat Restoration							
06.01 Habitat Restoration							
06.01.00 Mob and Demob	1.00		90,323	18,065	1,428	109,815	109815
TOTAL Mob and Demob	1.00		90,323	18,065	1,428	109,815	109815
06.01.01 Levee Breaching / Restoration							
06.01.01.01 Ext Levee Breaching, Pd3/River	1.00	EA	13,150	0	173	13,323	13323

		QUANTY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL CST	UNIT
06.01.01.02	Int Levee Breaching, Pd6/6A	4.00	EA	52,601	0	693	53,294	13323
06.01.01.03	Int Levee Breaching, Pd4/Pd5	1.00	EA	52,601	0	693	53,294	53294
06.01.01.04	Ent Levee Breaching, Pd4/River	1.00	EA	13,150	0	173	13,323	13323
06.01.01.05	Ext Levee Breaching, Pd3/River	1.00	EA	13,150	0	173	13,323	13323
TOTAL Levee Breaching / Restoration		1.00		144,652	0	1,906	146,557	146557
06.01.02	Ditch Blocks	1.00		2,393,015	478,603	37,833	2,909,452	2909452
06.01.03	levee lowering	1.00		664,074	0	8,749	672,823	672823
06.01.04	Supplemental Levee lowering	1.00		299,765	0	3,949	303,714	303714
06.01.05	Starter Channels w/Berms	1.00		4,775,983	0	62,923	4,838,906	4838906
TOTAL Habitat Restoration		1.00	EA	8,367,812	496,668	116,788	8,981,267	8981267
06.02 Salinity Reduction								
06.02.00	mob & demob & Site preparation	1.00		196,224	39,245	3,108	238,577	238577
TOTAL mob & demob & Site preparation		1.00		196,224	39,245	3,108	238,577	238577
06.02.01 Initial Levee Repair								
06.02.01.01	Pond 1	1.00		419,031	0	5,521	424,552	424552
06.02.01.02	Pond 1A	1.00		148,216	0	1,953	150,169	150169
06.02.01.03	Pond 2	1.00		950,007	0	12,516	962,523	962523
06.02.01.07	Pond 6	1.00		36,325	0	479	36,803	36803
06.02.01.08	Pond 6A	1.00		125,891	0	1,659	127,550	127550
06.02.01.09	Pond 7	1.00		72,650	0	957	73,607	73607
06.02.01.10	Pond 7A	1.00		30,729	0	405	31,133	31133
06.02.01.11	Pond 8	1.00		39,140	0	516	39,655	39655
TOTAL Initial Levee Repair		1.00		1,821,989	0	24,004	1,845,993	1845993
06.02.02 Rem/Repl pumps, 2ea, 15000 gpm								
06.02.02.01	Demo (e) pumps w/parts & fttgs	1.00		11,138	0	147	11,285	11285
06.02.02.02	Instal (n) pumps w/parts & fttgs	1.00		179,978	0	2,371	182,349	182349
TOTAL Rem/Repl pumps, 2ea, 15000 gpm		1.00		191,117	0	2,518	193,634	193634
06.02.03 Install Siphon, Pond 1 to 2								
06.02.03.01	Remove (e) siphone 73-in Dia	1.00		214,046	0	2,820	216,866	216866
06.02.03.02	Ints (n) siphone, 2 ea, 54" dia	1.00		576,503	0	7,595	584,098	584098
TOTAL Install Siphon, Pond 1 to 2		1.00		790,549	0	10,415	800,964	800964

	QUANTY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL CST	UNIT	

06.02.04	Rep Pond 2 Wtr Contr. Struct							
06.02.04.01	1.00		400,162	0	5,272	405,434	405434	
06.02.04.02	1.00		2,292,017	0	30,197	2,322,214	2322214	

TOTAL	1.00		2,692,179	0	35,469	2,727,648	2727648	
06.02.05	Pond 4/5 Wtr Contr. Struct.							
06.02.05.01	1.00		52,601	0	693	53,294	53294	
06.02.05.02	1.00		8,329,196	0	109,736	8,438,932	8438932	
06.02.05.03	1.00		2,927,696	0	38,572	2,966,268	2966268	

TOTAL	1.00		11309493	0	149,000	1145849311458493		
06.02.06	Int Lev Bre & Pond 5 Outfall							
06.02.06.01	1.00		52,601	0	693	53,294	53294	
06.02.06.02	1.00		3,686,478	0	48,569	3,735,046	3735046	
06.02.06.03	1.00		429,216	0	5,655	434,871	434871	

TOTAL	1.00		4,168,295	0	54,916	4,223,211	4223211	
06.02.07	Int NS/P7A, Outfall P8/P8 Ca, MC							
06.02.07.01	1.00		3,230,845	0	42,566	3,273,411	3273411	
06.02.07.02	1.00		350,784	0	4,622	355,405	355405	
06.02.07.03	1.00		860,733	0	11,340	872,073	872073	

TOTAL	1.00		4,442,362	0	58,527	4,500,889	4500889	
06.02.08	Dischge/Mix. Chamber to Napa S							
	1.00		366,188	0	4,824	371,012	371012	

TOTAL	1.00	EA	25978394	39,245	342,783	2636042226360422		
06.03	Pipeline							
06.03.01	Napa Pipeline							
06.03.01.01	1.00		27,311	0	360	27,671	27671	
06.03.01.02	1.00		30,153	0	397	30,550	30550	
06.03.01.03	32765	CY	136,966	0	1,805	138,771	4.24	
06.03.01.04	10360	CY	88,977	0	1,172	90,149	8.70	
06.03.01.05	410.00	LF	433,075	0	5,706	438,781	1070.20	
06.03.01.06	1.00	JOB	68,967	0	909	69,875	69875	
06.03.01.07	22340	LF	6,280,052	0	82,738	6,362,790	284.82	
06.03.01.08	410.00	LF	101,553	0	1,338	102,891	250.95	

** PROJECT OWNER SUMMARY - SPEC-IND **

		QUANTITY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL CST	UNIT
06.03.01.09	Install Air Relief Valv	7.00	EA	37,882	0	499	38,381	5482.97
06.03.01.10	Instal Concrete stress blks	75.00	EA	5,083	0	67	5,150	68.67
06.03.01.11	Granual fill	10360	CY	469,415	0	6,184	475,599	45.91
06.03.01.12	Compaction	32765	CY	119,202	0	1,570	120,773	3.69
06.03.01.13	Site Restoration	1.00	JOB	75,909	0	1,000	76,909	76909
TOTAL Napa Pipeline		1.00	EA	7,874,545	0	103,746	7,978,291	7978291
06.03.02 Sonoma Pipeline								
06.03.02.01	Mob and Demob			31,943	0	421	32,364	
06.03.02.02	Site Preparation			43,219	0	569	43,789	
06.03.02.03	Excavation & Trenching	1.00		283,130	0	3,730	286,860	286860
06.03.02.04	Haul Excavated Materials	1.00		150,961	0	1,989	152,950	152950
06.03.02.05	Boring Operation	1.00		422,917	0	5,572	428,489	428489
06.03.02.06	Dewatering Operation	1.00		68,967	0	909	69,875	69875
06.03.02.07	Purch and inst pipe, 24" & 18"	1.00		8,769,367	0	115,535	8,884,902	8884902
06.03.02.08	Insert PVC pipe, 24"	1.00		75,753	0	998	76,751	76751
06.03.02.09	Installation of Air Relief Valv	1.00		46,000	0	606	46,606	46606
06.03.02.10	Instal Concrete stress blks	1.00		6,490	0	85	6,575	6575.00
06.03.02.11	Granual fill	1.00		710,281	0	9,358	719,639	719639
06.03.02.12	Back fill & Compaction	1.00		122,385	0	1,612	123,997	123997
06.03.02.13	Site Restoration	1.00		412,611	0	5,436	418,047	418047
TOTAL Sonoma Pipeline		1.00	EA	11144024	0	146,820	1129084411290844	
06.03.03 CAC Pipeline								
06.03.03.01	Mob and Demob	1.00		18,144	0	239	18,383	18383
06.03.03.02	Site Preparation	1.00		24,585	0	324	24,909	24909
06.03.03.03	Excavation & Trenching	32765	CY	90,016	0	1,186	91,202	2.78
06.03.03.04	Haul Excavated Materials	10360	CY	43,134	0	568	43,702	4.22
06.03.03.06	Dewatering Operation	1.00	JOB	65,294	0	860	66,155	66155
06.03.03.07	Purch & inst PVC, 18" in trench	17715	LF	2,445,419	0	32,218	2,477,637	139.86
06.03.03.09	Install Air Relief Valv	7.00	EA	37,882	0	499	38,381	5482.97
06.03.03.10	Instal Concrete stress blks	75.00	EA	5,083	0	67	5,150	68.67
06.03.03.11	Granual fill	10360	CY	200,734	0	2,645	203,379	19.63
06.03.03.12	Back fill & Compaction	32765	CY	68,341	0	900	69,242	2.11
06.03.03.13	Site Restoration	1.00	JOB	3,513,281	0	46,287	3,559,568	3559568
TOTAL CAC Pipeline		1.00	EA	6,511,915	0	85,793	6,597,708	6597708
TOTAL Pipeline		1.00	EA	25530484	0	336,359	2586684325866843	
06.06 Monitoring Costs								
06.06.01	costs for surveys of Ponds	1.00		3,080,592	462,089	46,724	3,589,404	3589404

Thu 24 Apr 2003
 Eff. Date 04/25/03

Tri-Service Automated Cost Engineering System (TRACES)
 PROJECT NAPAS2: Napa Salt Marsh - Napa Salt Marsh Restoration
 Napa Salt Marsh Restoration
 ** PROJECT OWNER SUMMARY - SPEC-IND **

TIME 16:05:16
 SUMMARY PAGE 10

	QUANTY	UOM	CONTRACT	CONTNGCY	ESCALATN	TOTAL CST	UNIT
06.06.02 Administrative Costs	1.00		616,118	0	8,117	624,236	624236
TOTAL Monitoring Costs	1.00		3,696,711	462,089	54,841	4,213,640	4213640
06.99 Associated General Items							
06.99.01 Construction Overhead							
06.99.01. 5 Field Overhead			2,354,390	0	31,019	2,385,409	
TOTAL Construction Overhead			2,354,390	0	31,019	2,385,409	
06.99.05 Adaptive Management							
06.99.05.01 Cost of Evaluation	1.00		824,000	0	0	824,000	824000
06.99.05.02 Cost of Implem	1.00		10301200	0	0	10301200	10301200
TOTAL Adaptive Management			11125200	0	0	11125200	
TOTAL Associated General Items	1.00	JB	13479590	0	31,019	13510609	13510609
TOTAL Habitat Restoration	1.00		77052991	998,001	881,789	78932781	78932781
14 Recreation							
14.01 Picnic ground, wlkway, etc	1.00	EA	2,367,792	236,779	34,352	2,638,923	2638923
14.02 O&M Costs	1.00	EA	17,758	1,776	257	19,792	19792
TOTAL Recreation	1.00		2,385,550	238,555	34,609	2,658,715	2658715
30 Planning, Engineering and Design							
30.23 Constructn Contracts(s) Documnts							
30.23.01 Planning, Engrg and Design	1.00	EA	7,900,000	0	104,081	8,004,081	8004081
TOTAL Constructn Contracts(s) Documnts	1.00	EA	7,900,000	0	104,081	8,004,081	8004081
TOTAL Planning, Engineering and Design	1.00		7,900,000	0	104,081	8,004,081	8004081
31 Construction Management	1.00		8,361,332	0	110,159	8,471,491	8471491
TOTAL Napa Salt Marsh	1.00	EA	107114181	1,419,418	1,283,456	109817055	*****