

FAC 1403 Missile Operations Building

RUC: \$296.89

Source: USACE PAX Newsletter 3.2.2 dated 20 Mar 09
CC 141xx C2F
Deflated to FY-09 using Appendix C
In V12, Tri-Service and USACE PAX Newsletter values were updated while
all other values were inflated only.

SUC: \$5.20

Source: Cost Works model, inflated to FY-09 using Green Book Table 5-6
(O&M less DHP)
In V12, values were inflated only.

Model follows:

Chart: A chart showing relative annual sustainment requirements
follows:

FAC 1403-Missile Operations Building
CostWorks 2008 Quarter 2

Design Life= 50
Average S.F= 1,398

C.S.F=100 S.F; MSF=1000 S.F
Sq=100 S.F; M.L.F=1000 L.F

This spreadsheet was
exported from R.S Means
CostWorks

Terminal Cutoff is the removal of a single task occurrence if that task occurs
within 10% of the end of the design life and if the frequency of the task exceeds
20% of the design life. This prevents scheduling major work near the end of the
design life

Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences in Design Life	Adjusted Occurrences	Terminal Cutoff
Repair 8" concrete block wall - 1st floor	25	1 Bric	116.700	S.F.	2,341.00	2,847.48	2008 Qtr 2	2	1	\$ 2,847.48
Replace 8" concrete block wall - 1st floor	60	2 Bric	11.670	C.S.F.	11,610.13	13,975.64	2008 Qtr 2	0	0	\$ -
Replace 8" concrete block wall - 2nd floor	60	2 Bric	10.810	C.S.F.	11,471.25	13,820.59	2008 Qtr 2	0	0	\$ -
Repair brick wall - 1st floor	25	1 Bric	31.300	S.F.	1,158.10	1,407.25	2008 Qtr 2	2	1	\$ 1,407.25
Replace brick wall - 2nd floor	75	2 Bric	3.130	C.S.F.	6,402.70	7,682.87	2008 Qtr 2	0	0	\$ -
Replace glass - 1st floor (1% of glass)	1	1 Carp	1.200	S.F.	10.86	12.74	2008 Qtr 2	50	50	\$ 637.20
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	1 Carp	2.000	Ea.	229.92	272.40	2008 Qtr 2	2	2	\$ 544.80
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	1 Carp	20.000	Ea.	8,772.00	10,259.80	2008 Qtr 2	1	0	\$ -
Replace glass - 2nd floor (1% of glass)	1	1 Carp	1.200	S.F.	104.88	128.46	2008 Qtr 2	50	50	\$ 6,423.00
Repair 2'-0" x 3'-0" aluminum window - 2nd floor	20	1 Carp	2.000	Ea.	307.40	368.84	2008 Qtr 2	2	2	\$ 737.68
Replace 2'-0" x 3'-0" aluminum window - 2nd floor	50	1 Carp	20.000	Ea.	9,547.00	11,224.20	2008 Qtr 2	1	0	\$ -
Repair steel, painted, door	14	1 Carp	0.100	Ea.	58.24	68.64	2008 Qtr 2	3	3	\$ 205.91
Refinish 3'-0" x 7'-0" steel, painted, door	4	1 Pord	1.000	Ea.	32.91	40.31	2008 Qtr 2	12	12	\$ 483.72
Replace 3'-0" x 7'-0" steel, painted, door	45	1 Carp	1.000	Ea.	532.08	620.04	2008 Qtr 2	1	1	\$ 620.04
Debris removal and visual inspection built-up roofing	0.5	2 Rofc	0.909	M.S.F.	26.67	32.13	2008 Qtr 2	100	100	\$ 3,213.32
Non-destructive moisture inspection built-up roofing	5	2 Rofc	0.909	M.S.F.	82.52	99.81	2008 Qtr 2	10	10	\$ 998.08
Minor membrane repairs - (2% of roof area) built-up roofing	5	G5	0.181	Sq.	62.36	73.67	2008 Qtr 2	10	10	\$ 736.74
Flashing repairs - (2 S.F. per sq. repaired) built-up roofing	5	2 Rofc	0.363	S.F.	1.22	1.45	2008 Qtr 2	10	10	\$ 14.52
Minor membrane replacement - (25% of roof area) built-up roofing	20	G5	2.273	Sq.	1,351.14	1,611.74	2008 Qtr 2	2	2	\$ 3,223.48
Total roof replacement built-up roofing	28	G1	9.090	Sq.	5,188.39	6,144.39	2008 Qtr 2	1	1	\$ 6,144.39
Debris removal by hand & visual inspection,modified bitum/thermoplastc	1	2 Rofc	0.245	M.S.F.	7.19	8.66	2008 Qtr 2	50	50	\$ 433.04
Non-destructive moisture inspection,modified bitum/thermoplastic	5	2 Rofc	0.245	M.S.F.	22.24	26.90	2008 Qtr 2	10	10	\$ 269.01
Minor membrane repairs-(2% of roof area),modified bitum/thermoplastic	5	G5	0.049	Sq.	13.07	15.42	2008 Qtr 2	10	10	\$ 154.22
Flashing repairs-(2 S.F. per sq. repaired),modified bitum/thermoplastc	5	2 Rofc	0.098	S.F.	0.33	0.38	2008 Qtr 2	10	10	\$ 3.83
Membrane replacement-(25% of roof area),modified bitum/thermoplastic	20	G5	0.612	Sq.	389.69	462.00	2008 Qtr 2	2	2	\$ 924.00
Total roof replacement,modified bituminous / thermoplastic	25	G1	2.450	Sq.	1,192.76	1,410.00	2008 Qtr 2	2	1	\$ 1,410.00
Repair steel painted interior door	14	1 Carp	0.100	Ea.	16.78	19.81	2008 Qtr 2	3	3	\$ 59.44
Refinish 3'-0" x 7'-0" steel painted interior door	4	1 Pord	1.000	Ea.	49.40	60.82	2008 Qtr 2	12	12	\$ 729.84
Replace 3'-0" x 7'-0" steel painted interior door	60	1 Carp	1.000	Ea.	937.54	1,089.96	2008 Qtr 2	0	0	\$ -
Repair solid core wood door interior	11	1 Carp	10.000	Ea.	1,677.50	1,981.40	2008 Qtr 2	4	4	\$ 7,925.60
Refinish 3'-0" x 7'-0" solid core wood door interior	4	1 Pord	10.000	Ea.	422.20	519.80	2008 Qtr 2	12	12	\$ 6,237.60
Replace 3'-0" x 7'-0" solid core wood door interior	40	1 Carp	10.000	Ea.	3,667.00	4,251.20	2008 Qtr 2	1	1	\$ 4,251.20
Repair concrete steps	15	1 Cefi	0.700	S.F.	11.89	13.85	2008 Qtr 2	3	3	\$ 41.54
Replace concrete steps	100	2 Cefi	7.000	S.F.	346.57	420.63	2008 Qtr 2	0	0	\$ -
Replace metal stair railing interior	45	2 Sswk	12.000	L.F.	430.44	497.28	2008 Qtr 2	1	1	\$ 497.28
Repair fabric wall finish fabric interior	9	1 Pord	6.700	S.Y.	168.77	204.42	2008 Qtr 2	5	5	\$ 1,022.09

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CostWorks 2008 Quarter 2

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20% of the design life. This prevents scheduling major work near the end of the
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Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences in Design Life	Adjusted Occurrences	Terminal Cutoff
Replace fabric wall finish fabric interior	50	1 Pord	67.000	S.Y.	9,415.51	11,487.82	2008 Qtr 2	1	0	\$ -
Repair 5/8" drywall - (2% of walls)	20	1 Carp	77.060	S.F.	122.53	147.18	2008 Qtr 2	2	2	\$ 294.37
Refinish drywall	12	1 Pord	3,853.000	S.F.	2,311.80	2,851.22	2008 Qtr 2	4	3	\$ 8,553.66
Replace 5/8" drywall	75	2 Carp	3,853.000	S.F.	8,592.19	10,364.57	2008 Qtr 2	0	0	\$ -
Refinish concrete floor finished	25	2 Cefi	8.460	C.S.F.	2,956.26	3,559.04	2008 Qtr 2	2	1	\$ 3,559.04
Replace vinyl floor	18	1 Tilf	5.111	S.Y.	244.05	297.97	2008 Qtr 2	2	2	\$ 595.94
Terrazzo floor repairs - (2% of floors)	15	1 Mstz	1.320	S.F.	19.83	23.68	2008 Qtr 2	3	3	\$ 71.04
Replace terrazzo floor	75	2 Mstz	0.660	C.S.F.	950.36	1,125.48	2008 Qtr 2	0	0	\$ -
Replace carpet	12	2 Tilf	48.890	S.Y.	2,206.41	2,549.12	2008 Qtr 2	4	3	\$ 7,647.37
Repair sheetrock ceiling - (2% of ceilings)	20	1 Carp	0.015	C.S.F.	5.24	6.39	2008 Qtr 2	2	2	\$ 12.79
Refinish sheetrock ceiling	20	1 Pord	0.780	C.S.F.	98.02	121.13	2008 Qtr 2	2	2	\$ 242.25
Replace sheetrock ceiling	40	2 Carp	0.780	C.S.F.	279.50	341.26	2008 Qtr 2	1	1	\$ 341.26
Replace acoustic tile ceiling, fire-rated	20	1 Carp	5.180	C.S.F.	2,088.32	2,481.22	2008 Qtr 2	2	2	\$ 4,962.44
Replace flush valve diaphragm tankless water closet	10	1 Plum	2.000	Ea.	141.48	166.12	2008 Qtr 2	5	5	\$ 830.60
Rebuild flush valve tankless water closet	20	1 Plum	2.000	Ea.	263.96	320.02	2008 Qtr 2	2	2	\$ 640.04
Unplug clogged line tankless water closet	5	1 Plum	2.000	Ea.	336.52	420.36	2008 Qtr 2	10	10	\$ 4,203.60
Replace tankless water closet	35	2 Plum	2.000	Ea.	1,096.00	1,296.72	2008 Qtr 2	1	1	\$ 1,296.72
Replace tankless flush valve	25	1 Plum	2.000	Ea.	419.00	490.74	2008 Qtr 2	2	1	\$ 490.74
Replace wax ring gasket tankless water closet	5	1 Plum	2.000	Ea.	219.14	274.40	2008 Qtr 2	10	10	\$ 2,744.00
Replace flush valve diaphragm urinal	7	1 Plum	2.000	Ea.	141.48	166.12	2008 Qtr 2	7	7	\$ 1,162.84
Rebuild flush valve urinal	20	1 Plum	2.000	Ea.	263.96	320.02	2008 Qtr 2	2	2	\$ 640.04
Unplug line urinal	5	1 Plum	2.000	Ea.	224.28	279.82	2008 Qtr 2	10	10	\$ 2,798.20
Replace wall-hung urinal	35	2 Plum	2.000	Ea.	1,683.26	2,013.14	2008 Qtr 2	1	1	\$ 2,013.14
Replace washer in spud connection lavatory, vitreous china	7	1 Plum	2.000	Ea.	48.02	56.66	2008 Qtr 2	7	7	\$ 396.62
Replace washer in faucet lavatory, vitreous china	2	1 Plum	2.000	Ea.	19.70	24.58	2008 Qtr 2	25	25	\$ 614.50
Replace faucets lavatory, vitreous china	10	1 Plum	2.000	Ea.	246.98	298.12	2008 Qtr 2	5	5	\$ 1,490.60
Clean out strainer and P trap lavatory, vitreous china	2	1 Plum	2.000	Ea.	54.08	67.14	2008 Qtr 2	25	25	\$ 1,678.50
Replace lavatory, vitreous china	35	2 Plum	2.000	Ea.	1,060.38	1,271.40	2008 Qtr 2	1	1	\$ 1,271.40
Replace faucet washer sink, iron enamel	2	1 Plum	1.000	Ea.	9.79	12.19	2008 Qtr 2	25	25	\$ 304.75
Clean trap sink, iron enamel	3	1 Plum	1.000	Ea.	6.60	8.25	2008 Qtr 2	16	16	\$ 132.00
Replace faucets sink, iron enamel	10	1 Plum	1.000	Ea.	123.49	149.06	2008 Qtr 2	5	5	\$ 745.30
Unstop sink sink, iron enamel	2	1 Plum	1.000	Ea.	32.21	40.50	2008 Qtr 2	25	25	\$ 1,012.50
Replace sink, P.E.C.I. sink, iron enamel	35	2 Plum	1.000	Ea.	552.72	657.69	2008 Qtr 2	1	1	\$ 657.69
Check / minor repairs drinking fountain	1	1 Plum	1.000	Ea.	37.58	47.34	2008 Qtr 2	50	50	\$ 2,367.00
Repair internal leaks drinking fountain	4	1 Plum	1.000	Ea.	35.14	43.43	2008 Qtr 2	12	12	\$ 521.16
Correct water pressure drinking fountain	2	1 Plum	1.000	Ea.	32.21	40.50	2008 Qtr 2	25	25	\$ 1,012.50

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Replace refrigerant drinking fountain	2	1 Plum	1.000	Ea.	15.84	18.86	2008 Qtr 2	25	25	\$ 471.50
Repair drain leak drinking fountain	4	1 Plum	1.000	Ea.	22.63	27.03	2008 Qtr 2	12	12	\$ 324.36
Replace fountain drinking fountain	10	2 Plum	1.000	Ea.	1,005.84	1,193.57	2008 Qtr 2	5	5	\$ 5,967.85
Resolder joint pipe & fittings, copper	10	1 Plum	2.000	Ea.	65.70	80.90	2008 Qtr 2	5	5	\$ 404.50
Replace pipe and fittings, copper 3/4"	20	2 Plum	16.000	L.F.	283.52	343.68	2008 Qtr 2	2	2	\$ 687.36
Remove old insulation & replace with new, pipe 3/4", wall 1"	15	1 Plum	16.000	L.F.	112.16	136.64	2008 Qtr 2	3	3	\$ 409.92
Drain and flush water heater, electric, 120 gallon	7	1 Plum	0.500	Ea.	113.22	141.52	2008 Qtr 2	7	7	\$ 990.64
Check operation water heater, electric, 120 gallon	3	1 Plum	0.500	Ea.	0.99	1.24	2008 Qtr 2	16	16	\$ 19.84
Replace water heater, electric, 120 gallon	15	2 Plum	0.500	Ea.	4,596.23	5,271.90	2008 Qtr 2	3	3	\$ 15,815.69
Inspect / check pump / motor operation, lub. circulation pump, 1/12 HP	0.5	1 Plum	1.000	Ea.	6.19	7.72	2008 Qtr 2	100	100	\$ 772.00
Replace pump / motor assembly circulation pump, 1/12 HP	10	2 Plum	1.000	Ea.	736.33	863.29	2008 Qtr 2	5	5	\$ 4,316.45
Unclog main drain pipe & fittings, cast iron	10	1 Plum	1.000	Ea.	35.62	44.41	2008 Qtr 2	5	5	\$ 222.05
Replace pipe & fittings, cast iron	40	2 Plum	8.000	L.F.	335.20	405.60	2008 Qtr 2	1	1	\$ 405.60
Unclog floor drain, PVC	20	1 Plum	1.000	Ea.	37.09	45.87	2008 Qtr 2	2	2	\$ 91.74
Repair joint pipe and fittings, PVC	10	1 Plum	1.000	Ea.	115.94	144.14	2008 Qtr 2	5	5	\$ 720.70
Replace pipe, 4" pipe and fittings, PVC	30	2 Plum	8.000	L.F.	473.60	585.52	2008 Qtr 2	1	1	\$ 585.52
General maintenance & repair drain: roof, scupper, area	1	1 Plum	1.000	Ea.	28.35	35.67	2008 Qtr 2	50	50	\$ 1,783.50
Replace drain: roof, scupper, area	40	1 Plum	1.000	Ea.	398.34	468.14	2008 Qtr 2	1	1	\$ 468.14
Repair single zone rt. unit, 5 ton	10	2 Stpi	0.500	Ea.	964.86	1,157.28	2008 Qtr 2	5	5	\$ 5,786.40
Replace single zone rt. unit, 5 ton	15	Q5	1.000	Ea.	7,276.88	8,588.60	2008 Qtr 2	3	3	\$ 25,765.80
Inspect sprinkler system	1	1 Plum	1.000	Ea.	26.55	32.89	2008 Qtr 2	50	50	\$ 1,644.50
Replace sprinkler head	20	1 Plum	12.000	Ea.	764.16	941.52	2008 Qtr 2	2	2	\$ 1,883.04
Rebuild double check 3" backflow preventer sprinkler system	5	1 Plum	1.000	Ea.	598.06	715.83	2008 Qtr 2	10	10	\$ 7,158.30
Maintenance and repair motor starter, up to 600 V	5	1 Elec	2.000	Ea.	341.50	415.00	2008 Qtr 2	10	10	\$ 4,150.00
Maintenance and inspection motor starter, up to 600 V	0.5	1 Elec	2.000	Ea.	76.34	95.70	2008 Qtr 2	100	100	\$ 9,570.00
Replace starter motor starter, up to 600 V	18	1 Elec	2.000	Ea.	1,056.36	1,260.82	2008 Qtr 2	2	2	\$ 2,521.64
Maintenance and inspection lighting panel, indoor	3	1 Elec	1.000	Ea.	28.50	35.63	2008 Qtr 2	16	16	\$ 570.08
Repair failed breaker, 3 pole circuit breaker	10	1 Elec	1.000	Ea.	342.23	400.69	2008 Qtr 2	5	5	\$ 2,003.45
Maintenance and inspection C.B., 3 pole circuit breaker	0.33	1 Elec	1.000	Ea.	22.91	28.50	2008 Qtr 2	151	151	\$ 4,303.50
Replace C.B. molded case, 600 V, 3 pole circuit breaker	50	1 Elec	1.000	Ea.	3,157.74	3,611.55	2008 Qtr 2	1	0	\$ -
Maintenance and repair receptacles and plugs	20	1 Elec	97.000	Ea.	3,015.73	3,756.81	2008 Qtr 2	2	2	\$ 7,513.62
Replace receptacle/plug receptacles and plugs	20	1 Elec	97.000	Ea.	5,117.72	6,248.74	2008 Qtr 2	2	2	\$ 12,497.48
Maintenance and repair wiring devices, switches	10	1 Elec	36.000	Ea.	1,119.24	1,394.28	2008 Qtr 2	5	5	\$ 6,971.40
Replace switch wiring devices, switches	15	1 Elec	36.000	Ea.	1,843.56	2,244.60	2008 Qtr 2	3	3	\$ 6,733.80
Maintenance and repair incandescent lighting fixtures	10	1 Elec	1.000	Ea.	47.28	56.39	2008 Qtr 2	5	5	\$ 281.95
Replace lamp incandescent lighting fixtures	5	1 Elec	1.000	Ea.	6.98	8.52	2008 Qtr 2	10	10	\$ 85.20

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Replace fluor. ballast for fluorescent lighting fixture, 80 W	10	1 Elec	14.000	Ea.	1,394.12	1,681.12	2008 Qtr 2	5	5	\$ 8,405.60
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	14.000	Ea.	356.16	436.52	2008 Qtr 2	5	5	\$ 2,182.60
Repair smoke detector	10	1 Elec	3.000	Ea.	114.57	141.00	2008 Qtr 2	5	5	\$ 705.00
Check operation smoke detector	1	1 Elec	3.000	Ea.	34.20	42.90	2008 Qtr 2	50	50	\$ 2,145.00
Replace smoke detector	15	1 Elec	3.000	Ea.	568.65	680.97	2008 Qtr 2	3	3	\$ 2,042.91
Check and repair manual pull station	10	1 Elec	1.000	Ea.	69.21	84.87	2008 Qtr 2	5	5	\$ 424.35
Replace manual pull station	15	1 Elec	1.000	Ea.	125.74	151.89	2008 Qtr 2	3	3	\$ 455.67
Replace fire alarm bell, 6"	20	1 Elec	1.000	Ea.	142.28	171.51	2008 Qtr 2	2	2	\$ 343.02
					\$141,976.43	\$169,695.21				
									MR Subtotal	\$ 258,102.55
									MR Per Year	\$ 5,162.05
									PM Per Year	\$ 2,345.84
									Subtotal	\$ 7,507.89
									Total Per Unit	\$ 5.37

CostWorks 2009 Quarter 1 - FAC 1403-Missile Operations Building

Qty	Assembly Number	Description	Total In-House	Total Incl. O&P	Zip Code Prefix	Type	Release
11.000	B2035 225 1950	Door, emergency egress, swinging, annualized	544.61	632.61	200	FMR	2008 Qtr 2
1.000	C1025 110 1950	Fire doors, swinging, annualized	24.89	29.86	200	FMR	2008 Qtr 2
2.000	D2015 100 1950	Urinals, annualized	25.86	32.30	200	FMR	2008 Qtr 2
2.000	D2015 100 2950	Toilet (vacuum breaker type), annualized	25.86	32.30	200	FMR	2008 Qtr 2
2.000	D2015 100 4950	Lavatories, annualized	49.36	60.16	200	FMR	2008 Qtr 2
1.000	D2015 800 1950	Drink fountain, annualized	49.50	59.36	200	FMR	2008 Qtr 2
1.000	D3045 160 1950	VAV Boxes, annualized	61.31	76.00	200	FMR	2008 Qtr 2
1.000	D3055 210 1950	Package unit, air cooled, 3 thru 24 ton, annualized	207.71	251.03	200	FMR	2008 Qtr 2
1.000	D4015 100 1950	Backflow prevention device, up to 4", annualized	18.89	23.42	200	FMR	2008 Qtr 2
1.000	D4015 150 1950	Extinguishing system, wet pipe, annualized	806.79	983.35	200	FMR	2008 Qtr 2
1.000	D5015 220 1950	Circuit breaker, high voltage air, annualized	26.98	33.59	200	FMR	2008 Qtr 2
1.000	D5015 260 1950	Panelboard, 225 A and above, annualized	56.96	67.71	200	FMR	2008 Qtr 2
1.000	D5015 280 1950	Motor control center, over 400 A, annualized	53.91	64.15	200	FMR	2008 Qtr 2
			\$1,952.63	\$2,345.84			

FAC 1403 Sustainment by Year - Terminal Cutoff Applied

